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ABSTRACT

This detailed curriculum guide describes a model program (the Preschool Hearing Impaired Support Center) implemented in the Detroit Public Schools' preprimary classes for the hearing impaired. The auditory-oral approach is based on the developmental philosophy of Jean Piaget and on principles of regular early childhood education programs. Section I discusses the program's overall philosophy and theoretical orientation. Section II, on the classroom environment, describes physical space arrangements, materials, and accessories, while section III covers the daily schedule, lesson plans and planning, teacher planning, and time management. Section IV explains the role of the adult; it includes strategies for facilitating learning and describes keys for teacher success. Detailed curricular objectives for cognitive, language, speech, auditory, and social development are outlined in section V. Content and materials for independent, small group, and large group activities are described in section VI. In section VII, sample objectives and examples of teacher-child interactions are used to demonstrate the integration of cognitive, language, and social learning throughout the curriculum. Section VIII presents sample observation checklists, summarizes evaluation instruments considered most useful for teachers, and includes a teacher's guide to analyzing play observations. Section IX presents objectives and specific activities for school-home-school carryover. The final section of the guide is comprised of sample forms. (JW)

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A PRACTICAL GUIDE TO PLAY, PIAGET, AND LANGUAGE
IN
PREPRIMARY HEARING IMPAIRED PROGRAMS

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DETROIT'S PRESCHOOL HEARING IMPAIRED SUPPORT CENTER

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INTRODUCTION

The model described in this Curriculum Guide has been developed and implemented in an ongoing process over the last seven years in the Auditory-Oral Preprimary classes of the Detroit Public School's Programs for the Hearing Impaired. In October 1983, the classes received a federally-funded grant to demonstrate the "Detroit's Preschool Hearing Impaired Support Center" model to interested parents, professionals, and community members. This Guide is one aspect of that demonstration effort and represents the status of the model in 1985.

Children enter the Preprimary-level classes through the IEPC process between the ages of 2½ and 5½ years. Parents are introduced to both the auditory-oral and the total communication tracks and are ultimately responsible for making the final placement decision. Some of the children will have been serviced at home before age three by an infant consultant and others will be newly identified as having a hearing loss.

The Preprimary Hearing Impaired (PPHI) classes are housed in four classrooms in a centrally-located elementary school building, which also includes Head Start, Kindergarten through Grade 5, and classes for the mentally impaired. The enrollment in each PPHI class is made up of seven children in a multi-age or family-style grouping, with varying degrees of hearing loss, and with varying communication levels. Children attend school from 8:30 a.m. to 3:00 p.m. five days weekly during the 39-week school year. During the school day, children wear FM auditory equipment. The staff which provides service for these children includes four teachers of the hearing impaired, two Special Education Aides, a Teacher of the Speech and Language Impaired, a Physical Education teacher, and a hearing aid technician. Following the preschool experience, the children continue in elementary-level classes for the Hearing Impaired or return to their neighborhod school with teacher-consultant services.

I. PHILOSOPHY/THEORETICAL FOUNDATION

PHILOSOPHY

Typically one is called upon to define one's philosophy only for admission to a university or for fulfilling a course requirement. Occasionally the need arises again when there is an opportunity to develop one's own program and perhaps again, if one has a voice in selecting staff. Yet it is the match between the teacher's philosophy and the philosophy underlying the teaching method which is the determining factor in the success of the children in a program. Such has been the case at Detroit's Preschool Hearing Impaired Support Center. The program has been considered successful and this is largely due to a staff with a shared philosophy, a philosophy which concurs with the philosophy that supports the model's approach to working with young children with hearing impairments. It is less likely that the model would be successful if implemented by someone with a vastly different philosophy. What this says is that the approach of this model is not for everyone. It is a strong recommendation to read this PHILOSOPHY section and examine your own philosophy before thinking about implementing this model. It is recognizing and accepting that there isn't any one "right" or "best" way but only dedicated, thinking professional educators ever striving to do a better job.

There are three aspects of our philosophy which enter into the model's approach: (a) our perception of young children in general; (b) our perception of young children with hearing impairments; and (c) our perception of early childhood education.

Every child has an unknown potential for growth. Children will pass through stages of development in the same order but at individual, varying rates. Variation will also exist for each child in the growth of the different developmental functions: cognitive, motor, language, and social-emotional. These developmental functions are interrelated and make up the "total" or "whole" child.

The child with a hearing loss is a child first and foremost. The developmental function most directly affected by the hearing loss is that of language. If the child has an intact CNS, no other major handicapping condition, appropriate amplification and a "good" home environment, he will learn language in the "normal" sequence although at a different rate. The opportunity to develop this function, to learn to listen and to talk, should be the first option and it should not be separated from the other developmental tasks of childhood. Learning language is learning to communicate and must be meaningful and social.

The primary responsibility of all early childhood education programs is to meet children where they're at and prepare them for the future. This means that programs must be individualized in content, pacing, and learning styles to meet the developmental needs and background of experience which each child brings. It means that programs must be comprehensive to meet the needs of the "whole" child. Each aspect of development and its interrelationship with other functions must be addressed. For example motoric actions form the basis of cognitive information which is expressed in language forms in social contexts. It means that programs should be open and flexible, to enable children to acquire a broad base of knowledge and critical thinking skills rather than specific skills which might not be useful in the world of the future. The school experience must be positive, promote a continued interest in learning, and challenge children to extend and enrich their skills and knowledge to their fullest potential. At the same time, however, school programs have a responsibility to buffer children from the pressures of society to "hurry up" and learn more faster. Preschool should not be a simplified version of elementary programs with an overemphasis on "academic" skills. Finally, it means that programs must provide experiences which are not limited by cultural or gender stereotypes.

If you find at this point, that the philosophy just described is one that you feel comfortable with, read on! The approach described in the remaining pages may be just what you've been looking for.

PIAGET

A theory of learning consonant with this philosophy is found in the work of Jean Piaget. Because Piaget's work is still relatively foreign to the strongly behaviorist field of special education, we will digress briefly to highlight the central concepts which are relevant to this program. It is strongly suggested that the reader seek a more complete understanding through additional readings (a bibliography follows), observations of young children, and reflective thought.

While Piaget is generally referred to as the "Swiss developmental psychologist," he preferred the descriptor of "genetic epistemologist," perhaps to reinforce that the basis for his system of conceptualizing cognitive development was the existence of basic principles shared with biological development. Piaget, then, described intelligence in terms of 'mental structures which emerge in stages as the individual tries to adapt to his environment.' The mental structures (Piaget used the term "schemata") organize incoming information into groups according to common characteristics. What is significant, is that these mental structures change; they grow and develop; they become more refined and more differentiated. The cognitive structures of a child are qualitatively, as well as quantitatively, different from those of an adult. From birth through adulthood there is a continuous flow of successive qualitative and cumulative changes in the individual's mental structures. To assist us in understanding these changes, Piaget highlighted the major landmarks of this journey in "stages" of development. Each stage is characterized by a specific way of thinking, of acquiring and using knowledge about one's self and one's world. The names of the stages reflect the way the individual is organizing his knowledge, that is, the way his mental structures are working.

The first is the Sensorimotor Stage. This period flows approximately from birth through age two. During this time, thinking is primarily sensory and motoric. The child organizes and understands information from his environment according to how it smells, tastes, looks, sounds, feels, and what can be done with it.

The second stage is the Pre-Operational Stage. This period flows approximately from age two to age seven, the early childhood years. This actually is not a distinct stage but rather a transitional stage; an in-between time when thought is neither clearly sensori-motor based nor logical. The resulting instability and lack of organization of this time is very significant for adults trying to understand children who "have it one day and it's gone the next". It is possible though to characterize some qualities of children's thought during this stage. The period begins as the child adds representational activity to the sensory and motoric activity of the previous stage. Representational activity is the mental internalization of objects and actions. Thinking behavior is still largely intuitive, being guided by perceptions rather than rational considerations. The child organizes, understands, and acts on information on the basis of what he thinks he sees rather than what is logical. Thinking behavior is also "transductive". The child focuses on one feature at a time, unable to make a connection; he sees states or situations in isolation, not the changes in between. As a result, the child is not aware of the relationships between events and the significance of those relationships. Thinking behavior is egocentric; as far as the child is concerned, his are the only thoughts possible and so they must be correct. This obviously limits cognitive development but is a natural and essential part of this (and other) periods. This egocentrism will slowly diminish as the child moves through the stages.

The third stage is the Concrete Operations Stage. This period flows approximately from age seven to age eleven. The beginning of this stage is marked by the waning of the obstacles to the development of logical thought characterizing the preoperational stage. Now the child organizes and understands information by using his mind to manipulate the data; by applying logical thought processes. Physical actions are interiorized or transformed into mental operations and perceptual appearances are replaced by an understanding of relationships as a basis for decisions. However, these logical thought processes can only be applied to concrete problems, that is, problems involving objects or events, past or present, that are directly experienced.

The fourth stage is the Formal Operations Stage. This period flows from approximately age 11 through age 14. Logical thought processes are now applied to all classes of problems including those that are hypothetical, purely verbal or abstract. After this period, changes in thought abilities are no longer qualitative, but only quantitative.

All children, with or without hearing losses, pass through these stages in the same sequential order. The earliest stages are prerequisite for the later stages and are integrated into the later stages. Thus, the qualitative changes that distinguish the stages. The rate at which each individual progresses through the stages is variable though, being influenced by hereditary potential and experience. The development of higher level cognitive functions is not an automatic outgrowth of maturation. Rather, it is the complementary processes of organization and adaptation that are responsible.

We turn now to adaptation. As the individual interacts with the objects and events of his environment, he encounters new ideas and must make adaptive responses. Sometimes the new information fits into an existing mental structure. This addition to the structure affects its growth but does not result in change (or development). In other instances the new information does not fit into any existing structure. It is then necessary to modify an old structure to accommodate the new information or to create a brand new structure. In either case, the result is a change or development in the individual's cognitive functioning. Individuals are intrinsically (or biologically) motivated to seek a balance between augmenting old structures on the one hand and creating new/modifying old structures on the other.

To review, the development of cognition requires both organization and adaptation; cognitive structures develop only if the individual makes adaptive responses to his environment. This interaction must be direct, active, immediate and self-initiated. Knowledge cannot be handed to or transmitted to individuals; it must be discovered and constructed by each individual through physical and mental activity.

> "Knowledge is not a copy of reality. To know an event is not simply to look at it and make a mental copy, or image, of it. To know an object is to act on it. To know it is to modify, to transform the object, and to understand the process of transformation, and as a consequence to understand the way the object is constructed. An operation is thus the essence of knowledge; it is an interiorized action which modifies the object of knowledge."
>
> ("Piaget Notes on Learning", Sat. Rev. May 20, 1967).

It is important to note, particularly for teachers and parents of children with hearing impairments, that Piaget identifies action, not language, as the source for cognitive development. He in fact suggests that cognition can develop independent of language and even that cognition precedes and determines language.

In addition to physical and mental action, there is a second aspect of learning and that is representation. Representation can be defined in simple terms as the ability to use and create things to stand for an object or event. The development of representation can be organized into levels ordered by degree of complexity and abstractness. At the index level, the individual uses referential cues to stand for the real object/experience. The cue is directly or casually related to the physical properties of the specific object/experience. There is a physical connection between the representation and the real object/experience. At the next level, the symbol level, the individual uses and creates constructions to stand for the real object/experience. The constructions bear a physical resemblance to the object/experience but they exist separately. At the last level, the sign level, the individual uses and creates arbitrary-, socially-determined configurations to stand for the real object/experience. These configurations bear no resemblance to the real object/experience and their usage is based on the attribution of socially shared meanings. The foundation and precursor to the levels of representation is sensori-motor experiences with concrete, real materials and participation in real events.

Having explored the structure and process of intellectual development, we now turn to the content. The different types of experiences that an individual encounters give rise to different types of knowledge that play different roles in development. The three basic types of knowledge are generally referred to as (1) logico-mathematical knowledge, (2) physical knowledge; and (3) social-arbitrary knowledge. This artificial organization reflects the construction and discovery of relationships and the organization of relationships into system. Logico-mathematical knowledge refers to the relationships between and among objects, people, and events resulting from changes. This type of knowledge cannot be discovered in the nature of the objects (people or events), but must be constructed by the individual. Included under this heading are understandings of classification, seriation, spatial relations, temporal relations, and number. Physical knowledge refers to associations between a specific object and a specific action, regularities in the environment. This type of knowledge is discovered through feedback from objects and actions on those objects. Included under this heading are understandings of action patterns and properties. Social-arbitrary knowledge refers to the conventions and rules of one's culture. This type of knowledge cannot be constructed or discovered by the individual alone. It is acquired directly through feedback from interactions with other individuals in the culture. Included under this heading are facts related to vocabulary, rules of conduct, game rules, and moral codes.

Piaget has provided us with a system of conceptualizing cognitive development - an organizational tool that we can use to better understand how children learn and what they learn. In keeping with his concept of knowledge, Piaget has provided a system that requires the learner to interact with it in order to understand it. To master the vocabulary, to develop the observation skills, to understand the concepts, to construct learning strategies, to provide the experiences children need requires that the learner read, observe, think, talk, and practice. The system can be be uncomfortable and confusing but it also has the potential to be a very positive and powerful influence in the field of education.

The following outside resources are recommended:

Brown, J. (Ed.) Curriculum Planning for Young Children, Washington, D.C.: NAEYC, 1982.

Caplan, F. and Caplan, T. The Early Childhood Years, New York: Putnam, 1983.

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Cohen, D. and Stern, V. Observing and Recording the Behaviors of Young Children, New York: Teachers College Press, 1969.

Erickson, E.H. Childhood and Society, New York: Norton, 1950.

Forman, G. and Hill, F. Constructive Play: Applying Piaget in the Classroom, Reading, Mass: Addison-Wesley, 1983.

Garvey, C. Play, Cambridge, Mass: Harvard University Press, 1977.

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Pulaski, M.A.S. Understanding Piaget, New York: Harper and Row, 1971.

Saunder, R. and Bingham-Newman, A. Piaget for Teaching Children, Englewood, NJ: Prentice-Hall, 1984.

Sponseller, D. (Ed.) Play as a Learning Medium, Washington, D.C. NAEYC, 1974.

Sutton-Smith, B. and Sutton-Smith, S. How to Play with Your Children, New York: Hawthorn Books, 1974.

Weikart, D.; Rogers, L.; and McClelland, D. The Cognitively Oriented Curriculum, Washington, D.C.: NAEYC, 1971.

THE COGNITIVE LEARNING PROGRAM

An Overview

This manual describes an educational program that we have interpreted as being suggested by the works of Jean Piaget. The understanding that we have constructed of Piaget's theory involved assimilating and accommodating old and new information. The theoretical foundation is in Piaget's works on cognitive development, but in considering implications for the classroom, the authors have also called upon all of their experiences and understandings in child development, early childhood education, and education of the hearing impaired. Included in our "experiences and understandings" have been the opinions or interpretations of a number of highly credible authors/teachers:

* Ruth Saunders and Ann Bingham-Newman
* George Forman, David Kuschner and Fleet Hill
* David P. Weikart
* Carol Copple and Irving Sigel
* Constance Kamii
* Rheta DeVries

The choice of "regular" (ie, not special education) early childhood programs as models was deliberate, reflecting the basic premise of our program that children with hearing impairments are children first. It was and is our opinion that the principles and practices of a program for young hearing impaired children should be based on the principle and practices of a good early childhood program. We consider a "good" early childhood program to be one based on Piaget's theory of cognitive development.

The goals of the DPHISC program are: (1) to guide children in developing the thinking processes and skills for acquiring knowledge and solving problems and (2) to guide children in developing a broad base of knowledge. The program is process-oriented, not product-oriented; it is directed towards providing learning experiences rather than the achievement of specific skills. The vehicle for learning - in this program - is play. Play is defined by characteristics such as self-control, intrinsi motivation, choices, independence, exploration, self-initiation, self-direction, manipulation, problem-solving, interaction, construction, discovery, change, practice, pretending, and mastery. Play is not structured, teacher-directed or -controlled, a disguise for "therapy" or purely recreational (as in "a break from real work"). Play is the process by which the child continuously interacts with, experiments with, and interprets his environment. It is the most highly individualized and personalized way of learning. It addresses the unique needs, learning style and developmental level of each child. It develops both sides of the brain, abstract and creative. And, not only is play an agent of learning, it also serves as an index of learning to concerned adults. Play is the behavioral manifestation of what is happening to a child cognitively. Finally, and most significantly to teachers and parents of young hearing impaired children, play is not language-based nor language-dependent. The play of children with hearing losses does not appear to be qualitatively nor quantitatively different from that of the their hearing peers. Play is an activity of cognition and as such develops independent of language.

Defined in this way, play as a learning medium is in accordance with Piaget's description of cognitive development. This is probably the most important and significant implication in this program's interpretation for classroom practices. The use of play as the primary vehicle for learning marked the biggest difference between previous and current practices at the DPHISC site. This and the other implications which follow will be discussed at greater length in the body of this manual.

To acquire the different types of knowledge described by Piaget, children need to have different types of experiences. These different types of experiences form a framework for the content for the activities and experiences of this program. This framework is not intended as a list of skills to be taught and mastered, but rather as recommended opportunities to be provided. The framework follows:

1. Logico-mathematical Knowledge
    - A. Classification
        1. Opportunities for free exploration of collections.
        2. Opportunities for purposeful groupings.
        3. Opportunities for re-grouping.
        4. Opportunities to think about two properties of objects simultaneously.
    - B. Seriation
        1. Opportunities to actively explore relative differences among two or more objects.
        2. Opportunities to fit one sorted set of objects to another set.
        3. Opportunities to compare objects by size.
        4. Opportunities to compare objects by quality.
        5. Opportunities to compare groups of objects by quantity.
        6. Opportunities to arrange several objects in order by size.
    - C. Spatial Relations-Topology
        1. Opportunities to explore closed and not closed spaces.
        2. Opportunities to explore the relationships between "parts" and "wholes".
        3. Opportunities to explore distances.
        4. Opportunities to explore linear arrangements.
        5. Opportunities to explore alternate routes to an end point.
    - D. Spatial Relations - Euclidean and Projective
        1. Opportunities to explore the way objects fit together.
        2. Opportunities to rearrange and reshape materials.
        3. Opportunities to observe different viewpoints from other positions in space.
        4. Opportunities to experience one's own body.
        5. Opportunities to actively explore shapes.
    - E. Temporal Relations
        1. Opportunities to explore different rates of speed.
        2. Opportunities to experience a variety of marked time intervals.
        3. Opportunities to coordinate past, present, and future.

4. Opportunities to recognize cause-and-effect while participating in a sequenced event.
5. Opportunities to participate in sequenced events not involving cause-and-effect.
6. Opportunities to reconstruct the temporal order of three to five parts of an event.

F.
1. Opportunities to compare sets of quantities.
2. Opportunities to add and remove objects from a set.
3. Opportunities to explore reversability.
4. Opportunities to explore equivalence.
5. Opportunities for experiences with the conventional number system.
6. Opportunities to explore parts of a whole.

II. Physical Knowledge

A. Action Patterns
1. Opportunities to explore body action patterns.
2. Opportunities to further explore the uses of action patterns.
3. Opportunities to explore the functional use of objects.
4. Opportunities to integrate action patterns.

B. Properties
1. Opportunities to explore the "permanence" of objects.
2. Opportunities to explore the "constance" of objects.
3. Opportunities to actively explore objects in the environment using all of one's senses.
4. Opportunities to actively explore objects using a variety of action patterns.
5. Opportunities to explore objects in relation to each other.
6. Opportunities to use objects for other than their intended purpose.

III. Social Knowledge

A. Play Participation
1. Opportunities for social play.
2. Opportunities for sociodramatic play.

B. Social Awareness
1. Opportunities for interactions with peers and adults.
2. Opportunities to participate in a group.

C. Independence
1. Opportunities for caring for one's self.

2. Opportunities for learning work/play skills.
3. Opportunities for learning survival skills.

To develop higher levels of cognitive functioning, children need opportunities to develop representation and problem-solving skills._ Representation and problem-solving, as two distinct components, form the process or structure that is applied to all activities throughout the day, routine as well as play, individual as well as group, planned as well as spontaneous. The heirarchical nature of these skills suggest a developmental sequence. The sequences are not intended as lists of skills to be taught or mastered but as recommended opportunities to be provided. The sequences follow:

I. Problem-Solving
    A. Levels
        1. Ability to recognize cause-and-effect relationships/Ability to anticipate outcomes.
        2. Ability to perceive a problem/Ability to observe a discrepancy.
        3. Ability to confront a problem and try at least one solution.
        4. Ability to be aware of a number of different approaches and ideas to try in solving a problem.
        5. Ability to recognize the usefulness of object, tools or other people in solving problems.
        6. Ability to observe the effects of attempted solutions.
        7. Ability to evaluate outcomes.
        8. Ability to transfer learning to similar problems.

    B. Types
        1. Teacher-constructed
           Child-constructed
        2. Routine
           Novel
        3. Visible
           Not visible
        4. Reversible
           Not reversible

II. Representation
    A. Sensori-motor/Pr--representation level

1. Participating in actual experiences.
2. Using senses to explore real objects.
3. Using objects/materials for their routine/intended purpose.

B. Index Level
   1. Comparing realistic models to real objects.
   2. Using realistic models of objects in play.
   3. Using realistic models with parts missing in play.
   4. Using art/construction materials to form creations with obvious shape/form.
   5. Recognizing an object from a sensory cue.
   6. Recognizing andusing objects in different contexts.

C. Symbol Level
   1. Using an object dissimilar to the real object for play.
   2. Creating models of real objects from art/construction materials.
   3. Using created models in a play context.
   4. Creating drawings, tracings, or paintings to depict real objects or experiences.
   5. Using created drawings, tracings, or paintings in a play context.
   6. Pantomiming the use of an object using the real object.
   7. Directly imitating the actions of a person/object.
   8. Pantomiming the use of an object without the actual object.
   9. Imitating a person/object when the referent is absent.
   10. Using action to show how something/someone moves.
   11. Using action to show what something/someone does.
   12. Using action to show how something/someone looks.
   13. Producing the sound associated with an object.
   14. Producing a sound to pretend to be doing something.
   15. Using sounds to pretend to be an animate being.
   16. Using a shortened version of an action sequence to stand for the real event.
   17. Pretending to be someone else by doing and saying what the person does and says (dramatic play).

18. Using inanimate objects as characters in play.

D. Sign Level
1. Demonstrating an awareness that oral language stands for objects/experiences.
2. Using oral language to stand for objects/ experiences (receptive language).
3. Using oral language to stand for objects/ experiences (expressive language).
4. Using language appropriate to a role in a play theme.
5. Understanding a variety of representation systems.
6. Using a variety of representation systems.
7. Noticing that oral language can be written down and read back.
8. Recognizing written forms of oral language.
9. Writing down oral language.
10. Reading back written forms of oral language.

In order to provide the opportunities for these experiences and for play to be the primary medium for learning, careful consideration must be given to the total learning environment. The schedule must allow for exploration, problem-solving and practice. It must allow for self-selection and self-direction as well as group activities. It must allow for different rates of learning. A typical schedule includes major time periods for play and smaller periods for group and routine activities. The physical arrangement of the environment must be conducive to self-direction, choices, change, diversity, and direct action. Organization is essential: the room is divided into clearly delineated "centers" or areas and materials within centers are visible and accessible. Children who understand their relationship to the space and materials of the room are able to direct their own actions and learning. Children decide where they will play, with what and whom, and for how long, without adult intervention. The choice of materials provided in the centers must address different rates of learning, the transfer of learning, different content areas, different content areas, different levels of problem-solving, different levels of representation, different interests, different levels of cognitive organization. Materials that are manipulable and open-ended, as well as safe and presented in an orderly fashion, are appropriate. A few of the basics would be sand, water, blocks, and clay. As important as the selection of these materials is, even more important is that there is always an element of change introduced. In this environment, it is the role of the child to make choices, construct and discover knowledge through direct interaction with his environment, solve problems, and represent his experiences. The role of the adult is to follow the child's lead and prepare and prepare and change the environment in accordance. The plans that the adult makes must anticipate a wide variety of learning potentials and must be conducive to flexible implementation and on-the-spot changes. With her actions and questions, the adult introduces and extends opportunities for learning. It is not the role of the adult to prescribe, dictate, direct, or "teach" (in the traditional didactic sense). The special needs of the young child with a hearing impairment in terms of auditory, speech and language development are met as an integral part of the curriculum and an integral part of the learning environment. The activities and experiences that evolve from the cognitive "content" framework and "process/structure" sequence are the content and vehicle for language, speech and auditory development, both in planning and in practice. Listening and talking are not "taught" as isolated activities but learned as the child communicates in an interactive environment. Evaluation is an ongoing process consisting primarily of recorded teacher observations.

THE LANGUAGE LEARNING PROGRAM

An Overview

The DPHISC language learning program approaches language intervention from a cognitive and developmental perspective. The content and the process of this program are directed by five basic premises:

(a) that a child with a hearing impairment, an intact CNS, no additional handicaps, appropriate amplification, and a "normal" relationship with his parent(s) will learn language at the same rate and proceed through the same developmental stages as hearing children,

(b) that language is preceded and determined by cognition, i.e. children talk about what they know about,

(c) that language development is a "constructive/interactional process", i.e., language develops through direct, immediate, self-initiated, active interaction with the physical and social environment,

(d) that language is a symbolic behavior at the upper end of a continuum of representational behaviors, and

(e) that language is a social behavior, learned through and used for interaction with others.

In translation into classroom practices, the focus is on language "learning" as a communication process rather than language "teaching" or correction. The essence of the communication process being mutual respect, mutual sharing, and mutual understanding (INREAL). The content is drawn from general developmental sequences for syntax, pragmatics, and semantics as well as cognition and social awareness. The process involves interaction with the environment and the development of representation abilities. The program is described here only in general terms because the specifics must be individually designed by each child.

From the teachers standpoint, it is not necessarily an easy program to understand or to implement. A willingness to follow rather than lead the child, to experiment, and to seriously attend to the child's total communication environment are essential. A gradual submersion is sometimes the best approach. The program may be used alone or in combination with other language programs or formal structured lessons. It must, however, be used with a play-based cognitive development program.

The following strategies are utilized in our naturalistic approach. They consist of:

(1) Child centered content - Language learning is considered to be an interactional process of representing with knowledge what is already "known" cognitively. Therefore, the content is determined by the child's interests and experiences. Predetermined vocabulary and language arbitrarily selected by the teacher are not consistent with this view of the language learning process.

(2) The language learning program is integrated into the total curriculum and intervention is integrated into the total classroom day - The cognitive and social components of the curriculum are essential for the implementation of the language program. These activities, as a major part of the total classroom context, play a highly significant role in determining the form, function and content of each child's language learning.

(3) Interaction with the environment - The process of constructing language requires self-initiated, direct, immediate, active interaction with the environment. In intervention, interaction with the environment is essential because it evokes existing knowledge and permits encoding of actions.

(4) Representation - This is the process of making something (object, action, image, word, symbol) stand for something else (object, action, problem, situation, concept). Language is considered to be at the highest end of the representation continuum. In this language learning program, providing the children with

opportunities to develop the representational behaviors is also considered an opportunity to elicit, generate, and/or practice language.

(5) Adult-child language interaction - The classroom environment is set up in a way that ensures a high rate of adult-child interactions. The adults in turn systematically apply techniques adapted from the characteristics of mother-child language interactions.

(6) Silence, Observation, Understanding, and Listening (S.O.U.L.) - The use of S.O.U.L. permits the teacher time to observe, think about, establish a rapport, and create an empathetic relationship with the child.

(7) Mirroring - The teacher observes, interacts and then reflects the child's motor expression. This is especially useful with the nonverbal and preverbal child because it allows him/her to know that his level of expression is understood and accepted.

(8) Self Talk - At this level the teacher talks out his or her own participation during "play". The teacher selects the level of self talk appropriate to the child's verbal skills.

(9) Parallel Talk - The teacher at this level talks out the child's participation, thoughts or feelings during play.

(10) Vocal Monitoring and Reflecting - The teacher listens to the child and repeats what the child has said or says back correctly what the child has said in error.

(11) Expansion - The teacher at this level listens to the child and either responds with a corrected and expanded version of the child's words or elaborates upon the child's own words.

Further information about this approach will be found in the OBJECTIVES section. It is also recommended that the reader refer to the following outside resouces:

Blackwell, P.; Engren, E.; Fishgrund, J.; and Zarcadoolas, C. Sentences and Other Systems, Washington, D.C.: A. G. Bell Association for the Deaf, 1978.

Bryen, D.N. Inquiries into Child Language, Newton, Mass: Allyn and Bacon, Inc., 1982.

Johnston, E. and Johnston, A. The Piagetian Language Nursery, Gaithersburg, MD: Aspen Systems Corp, 1984.

Kretschmer, R. and Kretschmer, L. Language Development and Intervention with the Hearing Impaired, Baltimore, MD: Park Press, 1978.

McLean, J. and Snyder-McLean, L. A Transactional Approach to Early Language Training, Columbus, Ohio: Charles E. Merrill Publishing Co., 1978.

For further information about the INREAL language intervention model, contact:

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University of Colorado
CampW Box 409
Boulder, CO 80309

THE SOCIAL LEARNING PROGRAM

An Overview

Social development is a critical area of concern in early childhood programs that needs to be addressed in the curriculum for basic harmonious play and mutual work to take place in the classroom. Children need to be aware of and respect other students' feelings and possessions, exhibit appropriate manners that coincide with our culture and attend to a task to name but a few critical skills. This curriculum meets the social needs of children through a guided learning process based on the premise that the development of communication, both verbal and nonverbal, helps children to develop socially. Individual developmental patterns and learning styles are an integral part of the social curriculum. Allowing children to have control over themselves and their environment with the help of teachers to guide the learning process in turn strengthens the students' sense of independence and self worth. Play behavior and development is an integral part of the social skills curriculum. The DPHISC model utilizes an adaptation of Parten's social play categories to assess at what level a child is functioning and what new skills he needs to develop to proceed into the next stage. The categories are:

	Play Category	Approx. Age of Development
1.	Solitary	2 - 2½ yrs.
2.	Parallel	2½ - 3½ yrs.
3.	Associative	3½ - 4½ yrs.
4.	Cooperative	4½ - 7 yrs.

Social awareness and independence skills are evaluated and addressed in the curriculum in a very unobtrusive way, again by the guiding teacher. The Social Awareness and Independence categories include:

Social Awareness
Peer Interaction
Self Concept
Group Skills

Independence
Self Help
Work/Play Skills
Survival Skills

Individual objectives are chosen for each child in terms of his strengths and weaknesses. The framework for Social Development does not prescribe the sequence for these objectives but rather serves as a reference for the teacher's careful and critical observations. Incidental teaching, modeling, verbalizations, and taking advantage of opportune learning situations are key factors for the development of social skills in young children when using the DPHISC model.

THE PROGRAM FOR SCHOOL-HOME-SCHOOL CARRYOVER

School-Home-School Carryover is one aspect of the DPHISC model Program for Comprehensive Family Involvement but is included in this manual because of its direct and planned relationship to the classroom program. The DPHISC model Program for Comprehensive Family Involvement is an updated version of family involvement; it is in tune with current life-styles and social conditions and it is in tune with current research related to families and special education programs. It recognizes that families have their own styles, needs, time commitments, and resources. It recognizes that families do want to be involved in their child's education and can be involved if provided with a program that is flexible, individualized, meaningful, comprehensive, broad-based, at choice, and participatory. It recognizes that a child's growth and development is the shared responsibility of parents and educational staff. The School-Home-School Carryover aspect of the Family Program in particular recognizes the potential of the family to be the child's most effective teacher and recognizes opportunities for the transfer of the learning between home and school, and between school and home.

The thrust of School-Home-School Carryover is two-fold:

(a) planned and direct carryover of classroom objectives to the home environment; and

(b) general sharing of information and coordination of efforts between home and school and between school and home.

A wide variety of activities are designed with these purposes in mind and in keeping with the orientation of the overall Family Program.

THE DPHISC MODEL

Pulling It All Together

The programs for cognitive learning, language learning, and social learning have been described here as separate components but in the curriculum and in practice they are integrated. This integration is possible because they are based on a common philosophy and theory which recognize direct, immediate, active, self-initiated interaction with the environment as critical for all types of learning. Play is the vehicle for learning for the total child; he discovers and constructs physical, social, and logico-mathematical knowledge; he represents this knowledge in different ways including oral language; and he is compelled to communicate with those with whom he interacts. This approach is verv different from traditional, analytic programs which look at and deal with only one aspect of the child at a time. Separate activities for each recognized aspect of development, e.g. writing skills, speech skills, self-help skills, gross motor skills, is convenient for the teacher who must write lesson plans and evaluations but it is not in keeping with what we know about how children learn. "Pulling it all together", as the DPHISC model does, is more in tune with the way children learn although more of a challlenge for teachers. Learning to plan, teach, and evaluate more than one thing at a time in an integrated fashion takes time and practice. In the meantime, the children are learning whether the teacher has recorded it or not. The primary purpose of this Curriculum Guide is to share some organizational techniques which will make the teachers' job easier.

II. THE CLASSROOM ENVIRONMENT

PHYSICAL SPACE ARRANGEMENT

The arrangement of the model classroom reflects the belief that children learn best in a stimulating but ordered environment. It allows children to be active learners, to make choices, and to act upon those choices. The space and arrangement of the classroom also provide children with the opportunity to interact with materials, peers, and adults as well as the opportunity to solve problems.

Classrooms are divided into distinct, contained play areas or "centers" and are defined with boundaries such as shelves, functional room dividers, existing stairwells or coves, tables, area rugs, floor tape, crates, and/or child-sized furniture. The centers address the areas of child development included in the "whole" child approach to early childhood education. Typically, the basic centers would be:

* The Block Center
* The Art Center
* The Quiet Center
* The House Center
* The Science Center

If space is in abundance or team teaching between two classrooms is practiced, the centers can be expanded to include separate areas for:

* Writing
* Music/Listening
* Woodworking
* Sand/Water
* Large motor movement
* "Let's Pretend" (an area that encourages socio-dramatic play, exploring roles and environments other than just the house)

Otherwise, these activities are incorporated into the basic centers.

The amount and arrangement of space allowed for each center depends on the needs and interests of the children. In the model classrooms, spaces of about seven square feet to ten square feet were allowed for each center. It is sometimes necessary to make changes during the school year as the children's needs change.

Generally speaking the centers are located around the edges of the room with a central area for meeting on a carpet or at tables. Organization of space and materials is an important key to success.

Before setting up a classroom, there are some serious considerations that need to be addressed:

1. The Art Center should be near the water supply.
2. The Sand and Water Center should be away from heavy traffic.
3. The Quiet Center should be as far from the door and traveled areas as possible.
4. A large space should be provided for the Block Center.
5. The Quiet Center should be carpeted and include a table.
6. The Block Center should be carpeted to cut down on the noise of falling blocks, but flat enough for easy building. Indoor/outdoor carpeting works best.
7. The Music/Listening Center should be near electrical outlets in order to utilize tape recorders and phonographs.
8. The House Center should include enough space for dramatic play episodes to develop.
9. A central area should be arranged with tables or carpeting to allow for the combining of materials from various centers.
10. An area that is preferably carpeted should be planned for the use of small and large group activities. It must be large enough to accommodate the entire group of children. This can be one of the centers if space does not permit a separate location, but be sure to consider the distraction of materials and charts that are part of that existing center.

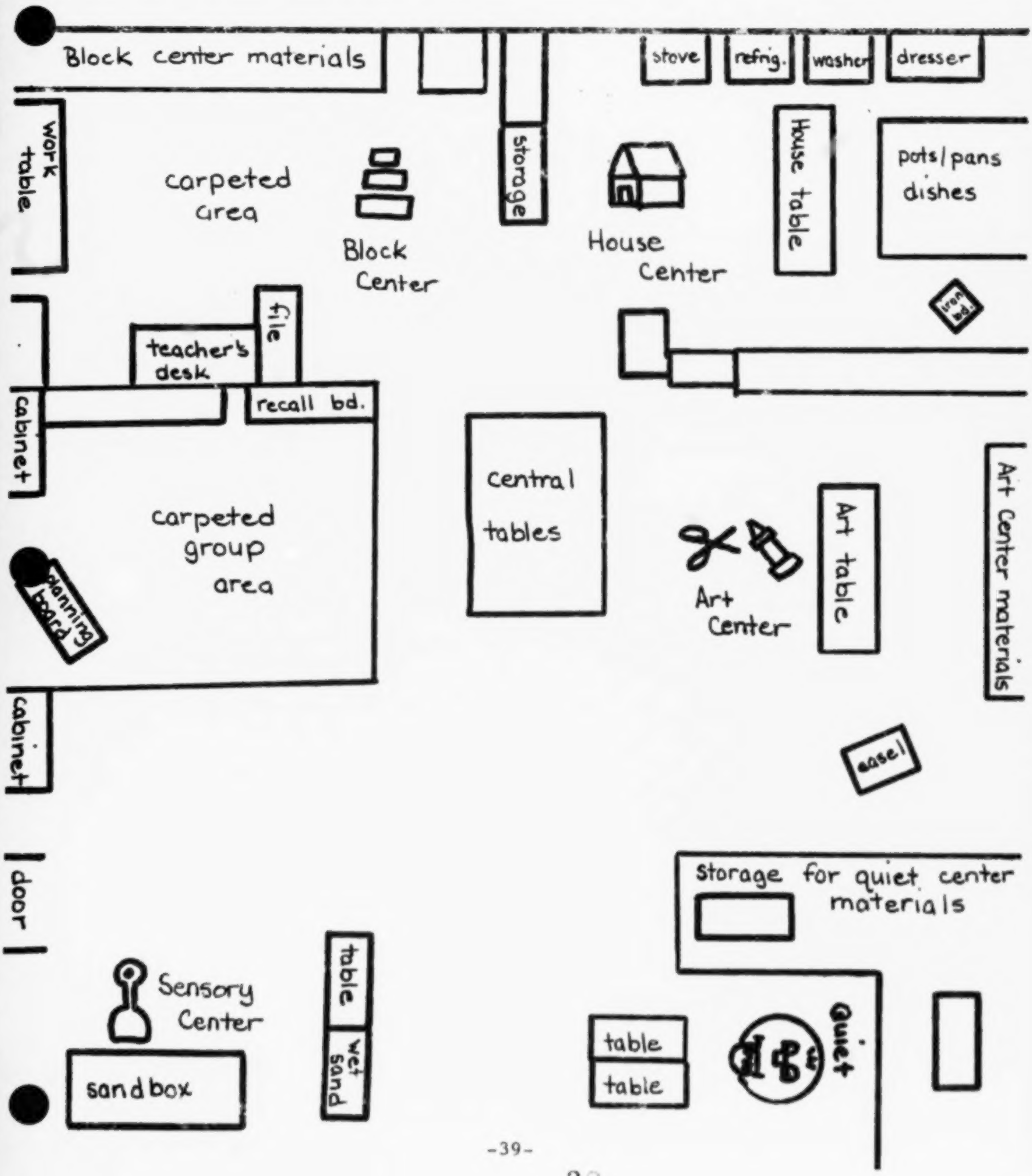
11. The Woodworking Center should be away from the flow of traffic and have a sturdy work surface.

12. Clean-up materials should be easily accessible to both the children and teachers alike for dealing with accident during the course of the school day.

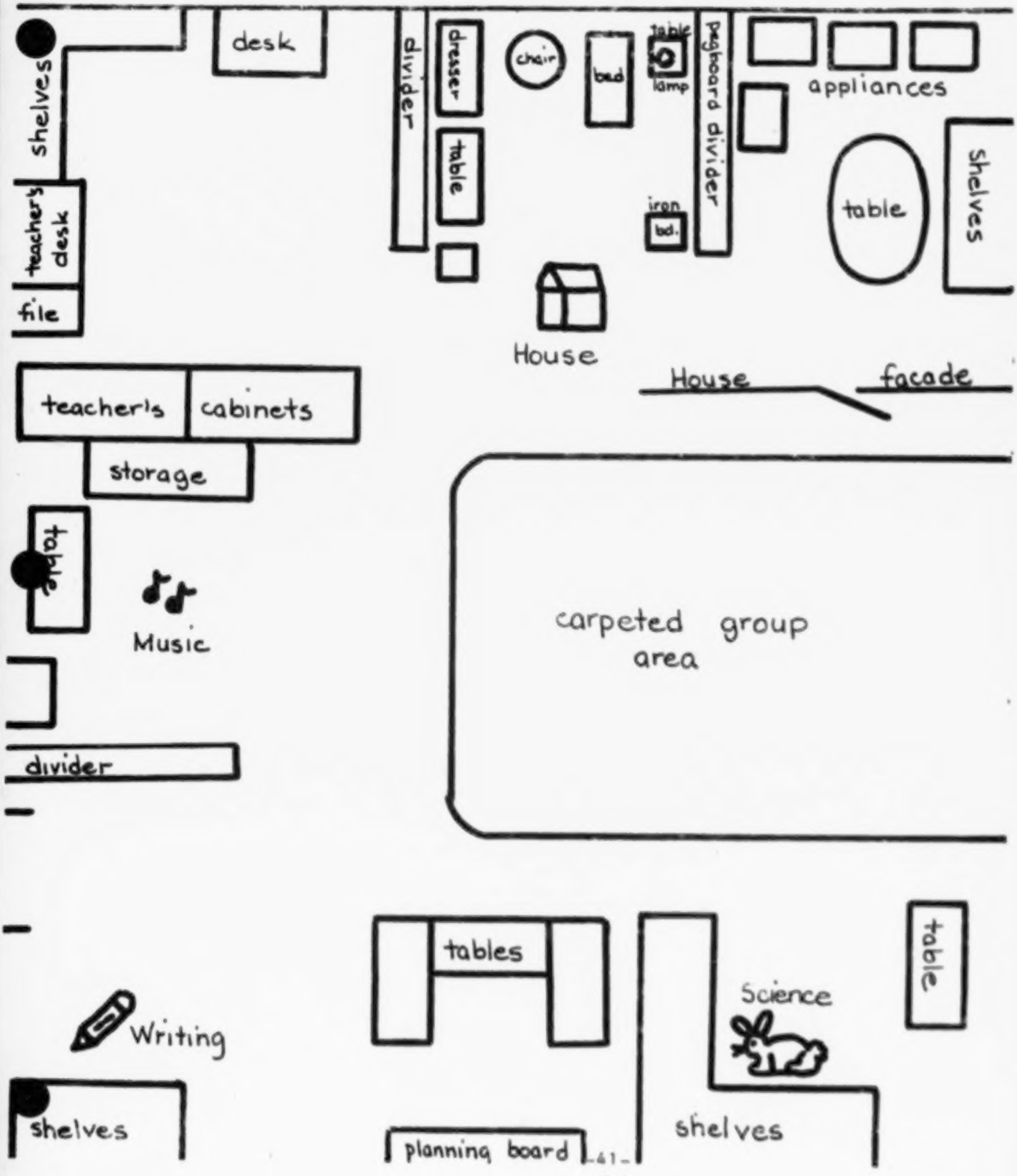
13. The physical space of the classroom should be responsive to the child's need to transform space. Many fixtures in a classroom can be modified to allow this to occur - with a few alterations steps can be made movable, slides can be knotched in various places besides the one existing incline, etc. Use your imagination!

The classroom environment reflects the need of children to be active learners and have control over that environment. Space is arranged to provide easy access of materials and allow for independence. The classroom is divided into areas or "centers" that reflect the whole "child" approach to education.

CLASSROOM ARRANGEMENT


Block center materials
stove
refrig.
washer
dresser
work table
carpeted area
storage
House table
pots/pans dishes
Block Center
House Center
iron bd.
file
teacher's desk
recall bd.
cabinet
central tables
carpeted group area
planning board
Art Center
Art table
Art Center materials
cabinet
easel
storage for quiet center materials
door
Sensory Center
table
wet sand
sandbox
table
table
Quiet

CLASSROOM ARRANGMENT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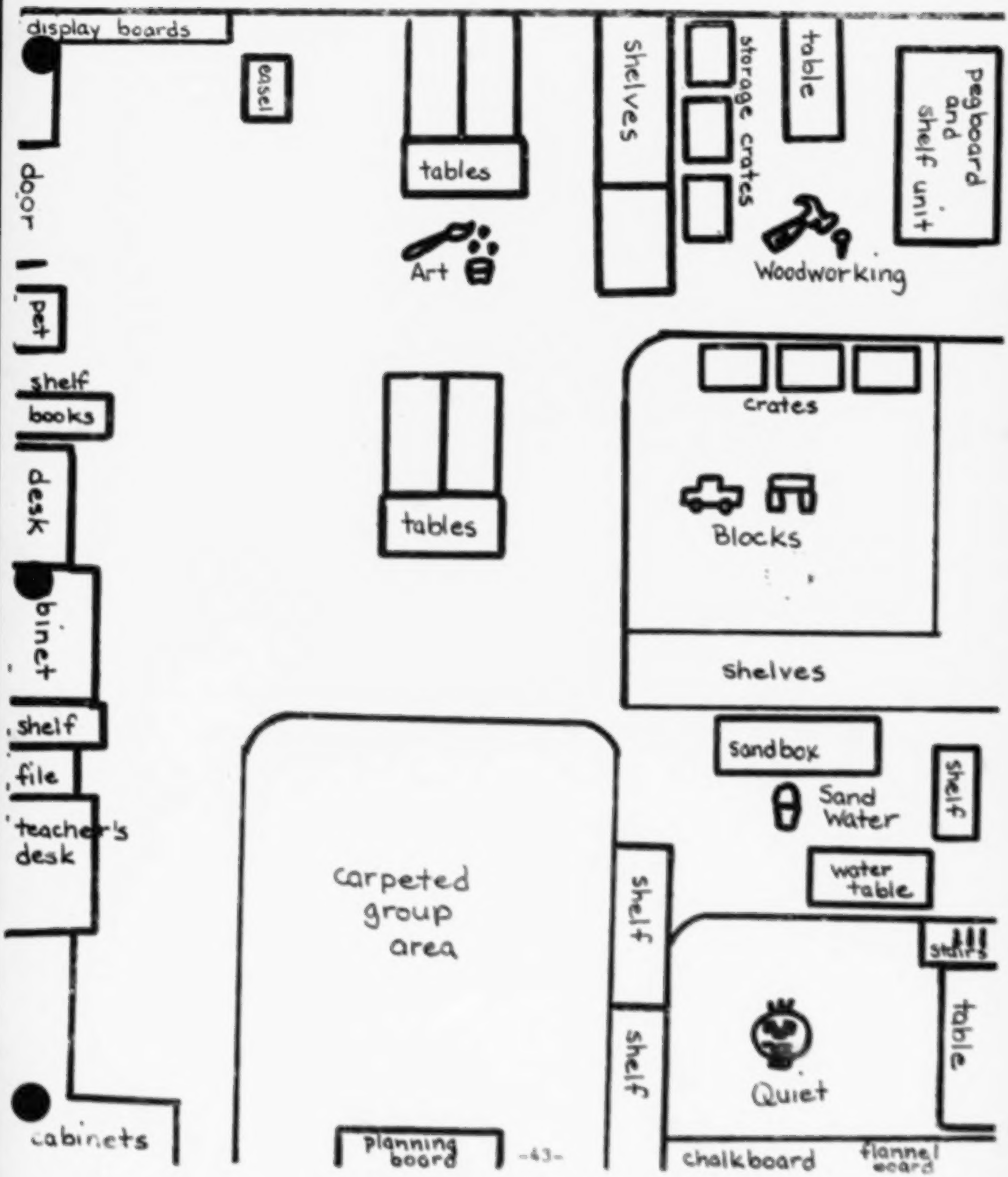
shelves
divider
dresser
table
chair
bed
table
lamp
pegboard divider
appliances
iron bd.
table
shelves
teacher's desk
file
House
House facade
teacher's cabinets
storage
table
Music
carpeted group area
divider
tables
table
Science
Writing
shelves
planning board
shelves

CLASSROOM ARRANGMENT


display boards
easel
tables
shelves
storage crates
table
pegboard and shelf unit
door
Art
Woodworking
pet
shelf
books
tables
crates
Blocks
desk
binet
shelves
shelf
file
sandbox
Sand Water
shelf
teacher's desk
carpeted group area
shelf
water table
stairs
shelf
table
Quiet
cabinets
planning board
chalkboard
flannel board

MATERIALS

The space has been arranged in your classroom based upon the previous guidelines and now you're ready to arrange and equip the materials for that space. Many of the materials needed will be in your classroom already because they are the basics of most preschool programs. The only difference will be the way in which you use those materials. It may also be necessary to add to your supply with common household items that can be converted into "treasures" by you and your students.

Below is a list of the basic classroom materials and the center for which they seem to be most appropriate. However, be flexible - use materials where they will best facilitate learning.

Basic Materials and Center Locations

*Blocks Center	Unit blocks and supplement blocks Large blocks, cardboard, hollow Table top blocks Colored one-inch cubes Giant Legos Large and small transportation items Family figures, wooden, rubber
*Quiet Center	Books Manipulative toys Flannelboard sets Puzzles
*Art	Various sizes and types of paper, e.g., construction, computer, manila, large roll paper, wall paper
Something for drying and displaying art material, e.g., clothesline, net, corkboard, Post It sticky board.	A variety of writing instruments, e.g. markers, crayons, chalk, pencils - large and small Easel Scissors Paint Paste and glue

Chalkboard Magazines Aprons or smocks	College box-foamies, yarn material scraps, small pieces of paper, toothpicks, cotton balls, popsicle sticks
Newspaper Plastic dropcloth	Clay and playdough Stapler and staples
*House Center	Child-sized stove, refrigerator and sink Child-sized table and chairs Dishes, pots, pans, silverware - both adult and child-sized Empty food cans and boxes Play food Dolls Doll bed Ironing board and iron Dress up clothing Mirror Dust pan and broom
*Science Center	Plants Pets - earthworms, fish, hamsters, tadpoles, guinea pigs, rabbit. Weather charts
*Listening Center	Record player Basic rhythm instruments
*Writing Center	Various types of paper (refer to Art Center) Lined and unlined paper Various writing instruments Alphabet charts Chalkboard Stapler Envelopes
*Sand/Water	Sand box or table

Water table or baby bathtub
Aprons or smocks
Hats

*Woodworking

Child-sized table or workbench
Tools
Adult size hammer
Vise
Safety goggles
Nails of various sizes
Tree stump
Wood scraps
Foam scraps

*"Let's Pretend"

- Ice Cream store: scoops, paper cones, empty containers, aprons, hats, table, chairs

- Burger Place: aprons, caps, and paper bags, fast food containers, pencil, pads, cash

- Doctor's office: doctor's bag, stethoscope, blood pressure cuff, pillow, empty bottles, gauze, band aids

- Unisex hair styling: photos of men and women, brushes, combs, chairs, tubs, bottles, mirrors

- Bakery: cookie cutters, muffin tins, baking sheets, bowls, utensils, tables, playdough

- Restaurant: plates, cups, napkins, menus, pads, plastic food, tables, cash

- Shoe store: assorted shoes, mirrors, chairs, cash box, shoe boxes, bags

- Jewelry store: shelves, tables, mirrors, velvet material, costume jewelry, hats

- Grocery store: large bags, empty cans and product containers, shelves, long table for checkout

- Fire station: caps, plastic raincoats, hose, table as truck, army blocks

- Police station: trikes made stationary, caps, army blocks (for jail), desk, typewriter

- Office: old office machines, typewriters, telephone, paper, pencils, stamp pads, tables, telephone, telephone books

- Post office: mail bags, old envelopes, paper, old stamps stamp pads, mail box from boxes

- Drugstore: shelves with old empty product bottles, checkout line from table cash bos

- Vet's office: as above with doctor's office, with addition of stuffed animals

- Garden: old swimming pools filled with potting soil, hand tools, shovels, seeds, tarps

- Marina: boat, paper fish, fishing poles, can, paper worms, picnic basket, caps, coats

- Beach: boat, large towels, wide tray or tub for sand, assorted shells, buckets, shovels

- Gas station: work clothes, caps, tools, hose, crates/boxes for gas pumps, tires, cash box, car (table with paper wheels and toy steering wheel)

- Space ship: Indoor climber covered with paper, control panel drawn inside, cover windows and walls with black paper dotted with white dots and yellow stars, bean bag chairs covered with parachute, space music on tape recorder, language master headsets, football helmets

- Cave: climber covered with old curtains or paper or big box with sides cut out; torn curtains hanging from ceiling, safari hats, flashlights, big picture of dinosaurs

- Gym: weights, jump rope, mirror, exercise tape, mat, stationary bike

- Thanksgiving: boat from refrigerator box reinforced with duct tape, sheet teepee (taped at wall and at floor, 45 degrees L) or teepee cut out from paper and painted

In addition to the basic materials that tend to remain constant throughout the school year, it is also necessary to choose materials that coincide with current objectives, the interests of the children and their developmental level. Below is a list of manufactured and teacher-made materials that will help you to begin thinking about material selection in terms of your chosen objectives.

Sample Material List Related to Objectives

*Blocks Center

Pull toys

- Community helper figures
- Carpet squares
- Wheels
- Hoops
- Fisher Price play sets
- Large and small animal figures
- Boxes of various sizes
- Puppets
- Lincoln logs
- Tinker toys
- Leggos - large and small
- Planks
- Bristle blocks
- Rope and/or plastic tubing

*Quiet Center

- Sorting tray and various small objects
- Pegboards and pegs
- Magnetic board and objects
- Beads and string
- Lotto games
- Games: Candyland, Chutes and Ladders
- Counters
- Shape sorters
- Balance
- Attribute blocks
- Puppets and puppet stage

*Art

- Fingerpaint
- Watercolors
- Various objects for painting-spools, sponges, macaroni, toothbrushes, etc.
- Ink pads and stamps
- Screening
- Plaster
- Soap flakes
- Paper bags
- Felt
- Tubes
- Old socks for puppets

*House

- Change types of dishes/pans
- Washer and dryer (can be made from large boxes)

Large blocks - planks
Things to cook with
(foamies, poker chips,
bottle caps, yarn,
buttons, paper shapes,
seeds, playdough)
Dramatic play props
Telephones
Baby bottles, bibs, diapers
TV (homemade from box of
empty cabinet)
Radio
Lamp

*Science

Simple machines
Magnifying glasses
Magnets
Microscope
Measuring tools
Science books
Collections (rocks, shells,
leaves, nuts, seeds)
Balance
Sensory materials
Eyedroppers

*Listening

Tape recorder
Language master
Rhythm instruments
Radio
Blindfolds
Block stage
Items to dance with (scarves,
ribbons)
Story and tape
Song props (charts, pictures,
manipulative items)
Organ

*Writing

Ink pads and stamps
Old greeting cards
Index cards
Sentence strips
Etch a sketch
Magna doddle
Typewriter
Stencils (letters and shapes)

Chart paper
Magic slates

***Sand/Water**

Buckets
Spoons, shovels and scoops
Sifters and strainers
Funnels
Plastic cars and people
Squirt bottles
Baster
Various plastic containers
Food coloring (diluted)
Rigid tubes and plastic
 flexible tubing

***Woodworking**

Present tools in the following order. Make sure that every child has mastered the tool before presenting the next item. Leave each tool in the center after it is presented.

Hammer and nails
Sandpaper and wood scraps
Screwdriver and screw board
Hand drill/bit with soft
 wood scraps
Wrenches, nuts and bolts
Child size saw and foam
 or wood scraps
Coping saw and foam
Pliers
Bottle caps, baby food jars,
 milk jug tops
Glue, wood scraps, foamies,
 spools

The following "scrap box list" suggests additional useful items.

coffee cans, esp. 2 and 3lb. sizes
orange juice cans, esp. plastic ones
Pringles, pretzels, corn balls cylinder-type containers with
 plastic lids
small plastic bottles
oatmeal and salt containers
empty spice jars, esp. with tops that have holes
margarine and butter tubs and lids
plastic mesh berry boxes
Baby Wipes containers (blue plastic rectangular-shaped)
small jewelry boxes
feathers, artificial flowers
yarn, ribbon, rickrack and other trimmings

pieces of colorful materials and felt
colored cord and string
pieces of Contact paper
wallpaper
adult size socks (for making puppets)
buttons
empty thread spools
heavy cardboard tubes (not toilet paper or paper towel rolls)
plain envelopes
small boxes that checks come in
shoe boxes
sea shells
pinecones
rubber jar rings
colored aquarium sand and stones
pieces of tile (ceramic and floor)
plastic tops from aerosol cans

There are some basic strategies to use when selecting materials for each center in the classroom. Take some time to over the following list before identifying equipment to be provided in the centers. Remember that materials are only vehicles for learning. What is most important is the teacher-child and child-child interaction with the materials.

(1) Select materials from the child's point of view:

- is it interesting?
- is it challenging?
- is it fun?
- is it thought-provoking?
- is it exciting/surprising?

(2) Provide lots of open-ended materials that allow children to use them in different ways. Some examples of these are Legos, Tinker toys, paint, clay, blocks, Cubes Bobbins & Beams, and wire.

(3) Material choices should reflect the interests and needs of the children in your classroom.

(4) Enough material should be provided to allow children to make choices. Our classroom usually begin with three or four materials/activities in each center in addition to the basic materials that remain constant throughout the year. The teacher then adds to that material

on a weekly basis until the objective is changed. Materials that are not being used - because the children are not interested or are surfeited - may be removed as well. These choices help prepare children for decision making as adults.

(5) Materials should be functionally arranged and labeled on shelves, tables or pegboards at the child's level to allow for independence. Cluttered, unorganized shelves do not encourage learning.

(6) Basic materials for the center should be kept in the same predictable place and not be moved randomly.

(7) Use a minimal number of self-correcting, pre-packaged materials that limit opportunities for exploration and trial-and-error. Open-ended materials are more likely to challenge children to think.

(8) Keep in mind that sensori-motor experiences with real objects/events must precede representational acts regardless of the child's age or abilities in other content areas.

(9) The same materials can and will be selected for different purposes throughout the school year. Be flexible.

(10) Give consideration to the developmental age of the children who will be using the materials - will it be safe? will it be challenging or too easy?

(11) Change is one of the keys to success in material selection. Providing new materials, changing the location of old materials, providing a new use for familiar materials, or using familiar materials in combination with other materials all contribute to bringing the necessary change.

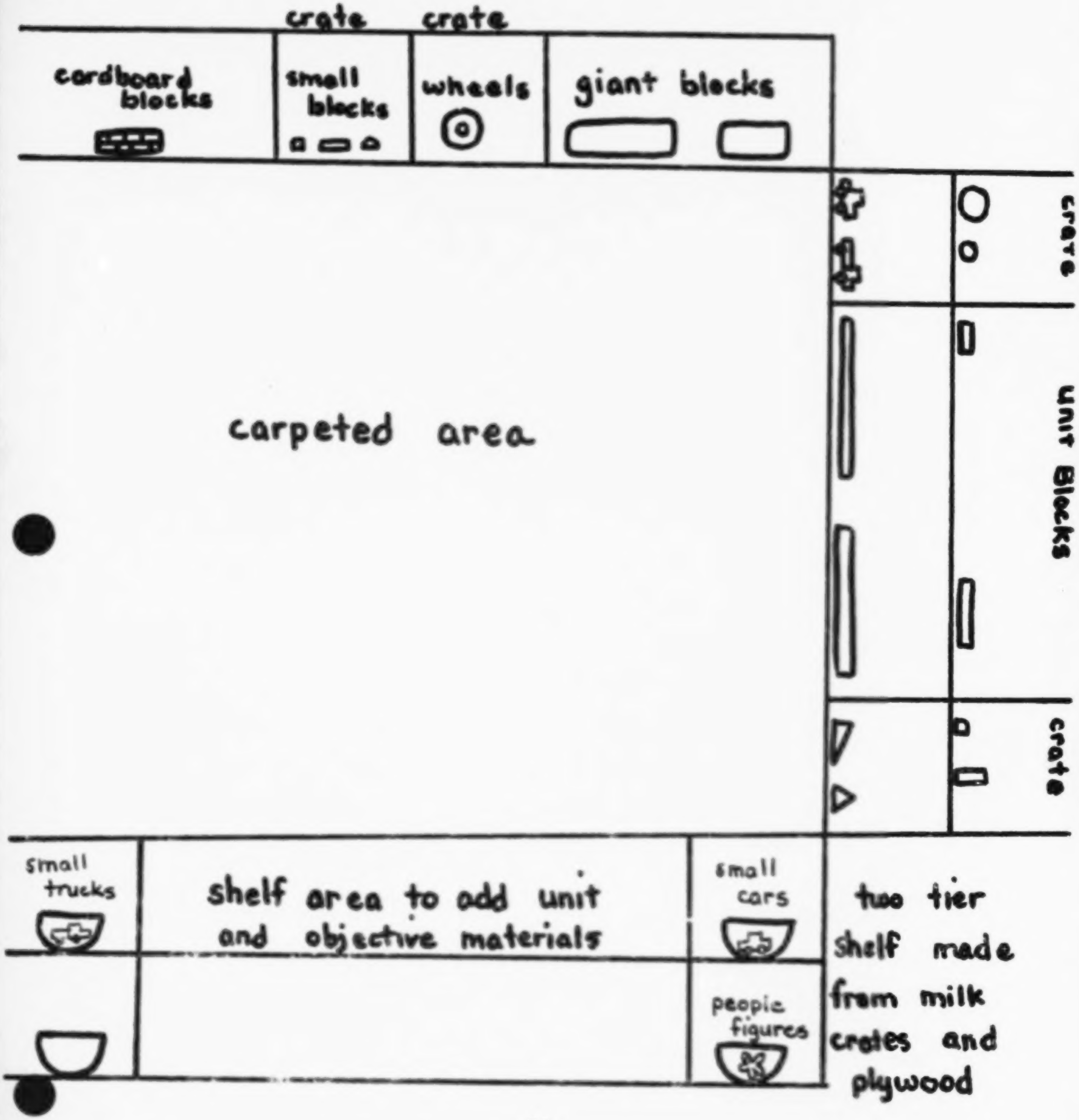
(12) Materials should be child-centered, requiring a minimum of teacher-direction or teacher-supervision. Materials should be safe and accessible.

(13) Provide materials that enable the child to project his own problem and produce some effect on his world.

Labeling of centers and center materials is another important aspect of the classroom environment. Clearly labeled shelves with materials in a predictable, ordered place encourage learning to occur. The children will not have to spend much of their play/work time just locating material if the environment is clearly labeled and defined. Labeling can be done by outlining materials on paper or contact paper, by using pictures from magazines or catalogues, or by using drawings of the objects and affixing them to the appropriate location. A sample labeling of a block center follows.

Notice that a combination of outlines and pictures have been utilized in the diagram. Use what works best for your children. Usually the younger the children the more they will need the realistic outline that is the same size and shape as the material. Keep in mind also that cluttered, unorganized shelves do not encourage clarity in the thinking process.

SAMPLE LABELING OF BLOCK CENTER MATERIALS


crate
crate
cardboard blocks
small blocks
wheels
giant blocks
crate
unit Blocks
crate
carpeted area
small trucks
shelf area to add unit and objective materials
small cars
people figures
two tier shelf made from milk crates and plywood

Your basic materials for each center are now in place and you have chosen the objectives that currently will be addressed in the classroom. You also have decided upon the materials that you will use to develop those objectives. Now you need to decide in what center the materials will work best. Generally speaking use your own judgment when selecting the center. Some materials by their very nature will warrant a particular area/ center. Flannelboard stories in the Quiet Center, collection of nuts, leaves, and rocks in the Science Center, cars and trucks in the Block Center, and restaurant materials in the House Center are some examples. Some materials that you have chosen may not be so clearly defined. For those you can be as creative as you'd like in selecting the location. Try to approach it from a child's point of view: where would I best be able to use this material in the way highlighted by the teacher's objective.

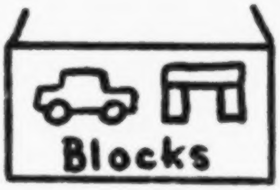
Introducing the new materials in each center is another important aspect to be considered. One way is to walk through the centers at the beginning of the week. Ask the children to locate the new material and actually show one way in which that object/activity can be used. This helps the children identify where a particular material is located as well as providing them with a way in which to use that material. This is especially helpful for new materials that the children have not used or seen before. The walk-through also helps the children develop the ability to think ahead to where and what they will choose to do during the play/work time. It is also extremely helpful at this time to set limits regarding the use and movement of materials. For example, let the children know that they cannot throw sand or take paint into the Quiet center. Unsafe choices of material use should never be provided to the children. Other ways to introduce new materials might be at small-group time, through a matching game, through teacher-made books about each center or by involving the children in setting out the materials.

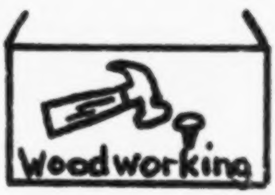
ACCESSORIES

In addition to the classroom environment and materials, some practical accessories will make it easier to plan, schedule, and organize the school day. These tools help children independently anticipate what will come next, identify centers, know what their responsibilities are, recognize the number of children per center, and integrate knowledge. They also help the teachers keep track of individual objectives for each child.

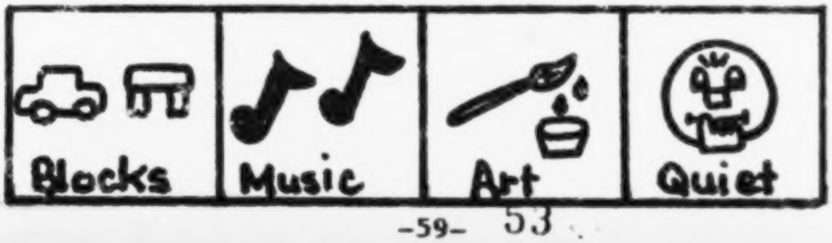
Listed below are the accessories that the DPHISC teachers have found useful in their classrooms.

(1) Center charts - These charts are positioned in a prominent place in each center, usually hanging from the ceiling above each area. The charts depict some basic material from each center and are labeled with the name of the center. These charts help the children recognize/name the center and facilitate the planning process.

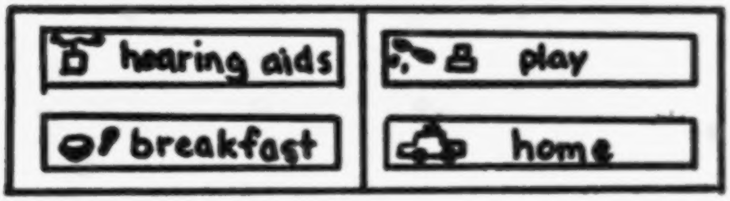




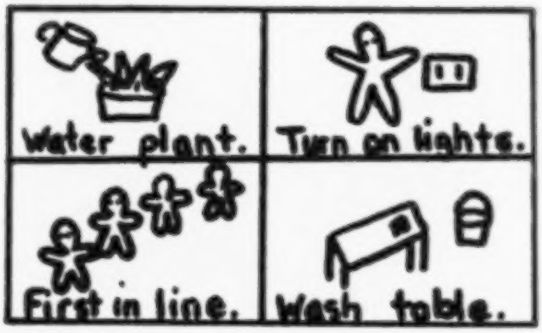
(2) Planning board - The planning board represents each of the centers in the classroom (or classrooms, if team teaching) with teacher-made pictures or photographs. They should be the same pictures that are used for the center charts. The planning board also helps facilitate the planning process that will be discussed in THE SCHEDULE.



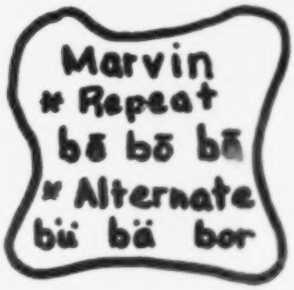
(3) Schedule charts - The schedule chart is a good method for keeping both children and adults aware of what will be happening throughout the day. Each time period is depicted on a card strip. These time periods include breakfast, planning time, play/work time, small group, clean up, etc. The card strips are placed in sequential order in a pocket chart. The chart can then be referred to throughout the school day. Turning each time period card over once it is completed helps make the transitions easier for children.

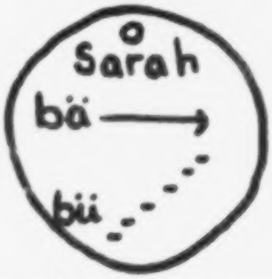


(4) Job charts - These are the traditional classroom job charts that most preschool classrooms contain indicating each students responsibility in the classroom. Some jobs might be: pass out the placemats, water plants, get water for clean-up area, turn on/off the lights and be first in line.

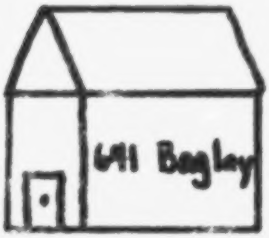

Water plant.
Turn on lights.
First in line.
Wash table.

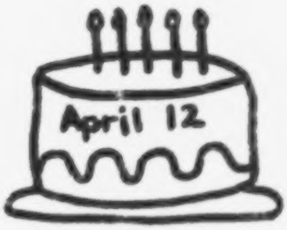
(5) Speech target charts - Individual speech targets for each child taken from the Ling Speech Program can be listed on charts and posted in the classroom for reference at various times when speech targets are practiced during the day. These charts make it easier for the teacher to organize objectives for each child. It takes one moment to look up at a particular speech target that is posted and work on it with that particular child as opposed to locating the piece of paper its written on. A separate chart for each child is easiest to read. An alternative to wall charts are tags that can be pinned on individual children.





(6) Survival Skill Charts - These charts are posted for both the benefit of the teacher and children in the classroom. They contain the specific survival skill that a child is currently working on, such as tell first name, full name, sex, address, city, birthday, state, or phone number. The charts can be made motivating by cutting out house patterns, boy/girl patterns, birthday cakes, telephone patterns, etc., and listing information on each.

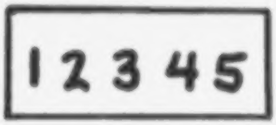


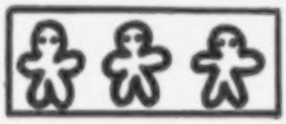


(7) Cognitive and language objective charts - To help organize specific objectives for each child the teacher can list them on a chart and post them in the classroom. These charts make it easier for the teacher to see at a glance the specific focus for a particular child and to utilize that curricular information throughout the course of the school day.

(8) Bulletin boards - Interesting bulletin boards that reflect the current curriculum objectives provide a means for children to generalize learning, as well as see another media in which the current learning is applied and represented.

(9) Charts that limit the number of children per center - Limiting children in each center helps to cut down on the number of conflicts over highly appealing materials and children in too close proximity to others. The centers that are very messy such as Sand/Water and centers that need a little more supervision such as Woodworking can be limited to two to three children. Limiting also helps to decrease the number of accidents by allowing the teacher to provide that necessary extra supervision.





Accessories can help both teachers and children organize themselves and their environment. Select the tools that will be the most useful for you and your children or find other ways that might better meet your needs.

III. SCHEDULE/TIME MANAGEMENT

THE SCHEDULE

Establishing a daily routine or schedule is critical because it permits children and adults alike to concentrate their energies on the task at hand without having to worry or decide 'what comes next' or 'when will we get to'. The DPHISC schedule provides a balance between child-directed and adult-guided or-directed learning. The daily routine gives each child ample time to plan their playtime and carry out their planned activity/activities. The coordination of the major activity periods are designed to provide for interactions with materials, peers, and adults both on a one-to-one basis and in a group setting. But most of all they encourage children to talk. The major activity periods of the schedule are:

Planning
Self-Selection/Play/Work Time
Clean-up
Small group
Routine activities-meals, bathrooming,
hearing aids, resttime, arrival, and
dismissal
Large group

Each of these major activity periods will now be discussed in further detail.

Planning

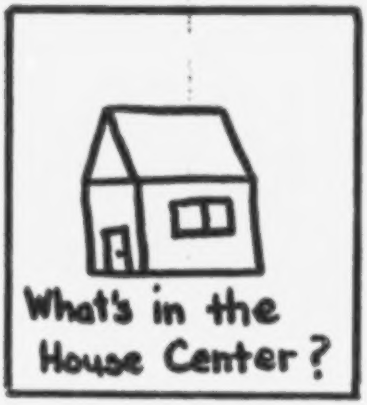
The planning period is a time to develop the ability to think ahead to where and what one will choose to do during the Self-Selection/Play activity period and to develop the ability to control one's impulses. Children indicate what they're going to do by pointing, standing in a center, bringing back a material from a particular center, locating a center from the planning board, drawing a picture and/or verbalizing their plan. The central planning board discussed previously in the

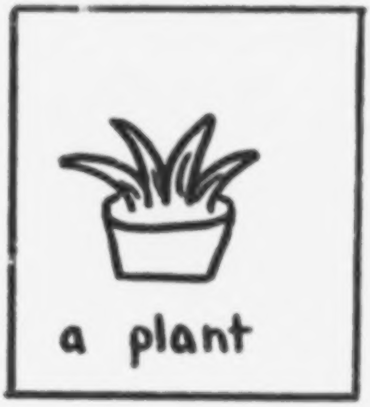
"Accessories" section is of prime importance to the planning process. Photographs or symbols representing each child are utilized with the planning board (which contains a picture or photograph to represent each center). The child places his picture or symbol under the center that represents his chosen plan for that play period and verbalizes or indicates in some way his choice.

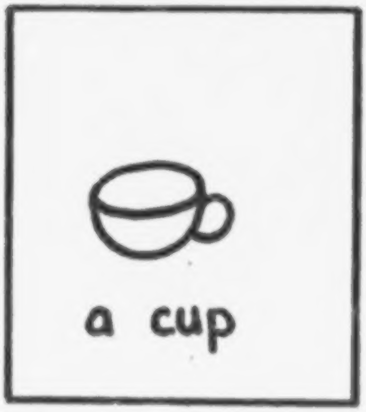
Planning, like all cognitive activities, develops to higher levels with experience: (a) picking/standing in a center; (b) picking a material/activity within a center; (c) indicating what will be done with the material in the center; (d) planning a sequence of activities with a particular material in the center; (e) planning for a first and second play activity in different centers. The planning process can be done as a group activity with each child watching what their peers are planning or individually as the children arrive in the morning, finish breakfast, wake up from the rest period, or from any other suitable activity. For group planning allow approximately five to fifteen minutes.

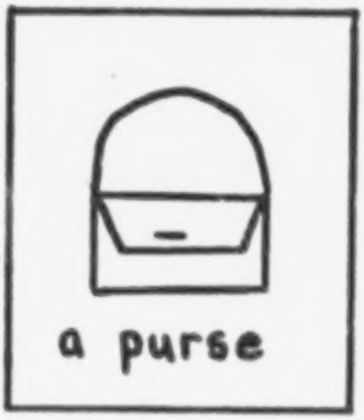
The planning process can continue during the Self-Selection/Playtime, but it should be done more informally so it doesn't interfere with the learning process. Planning becomes routine for the children with experience and they tend to automatically move their pictures to the next chosen center on the planning board when they have completed their initial plan. The teacher in passing may also ask a child what he will be doing next. Another option is a "check-in" board for each center. Children hang their tag, place their name card in a slot or in some other way indicate on this board that they plan to play at this center.

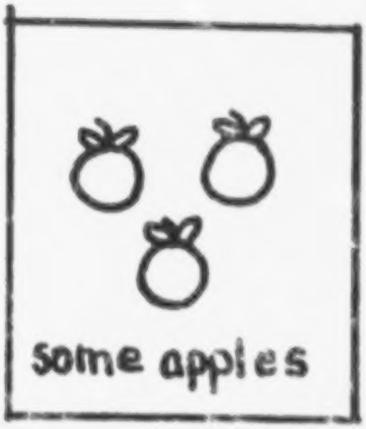
Planning is facilitated when children can recognize or name the centers and when they know what materials are available in each center. Introduce the centers and materials - especially at the beginning of the school year - through the use of a room tour at the beginning of each week, small and large group activities and/or teacher-made center books containing pictures and labels of "What's in the ______ center?"

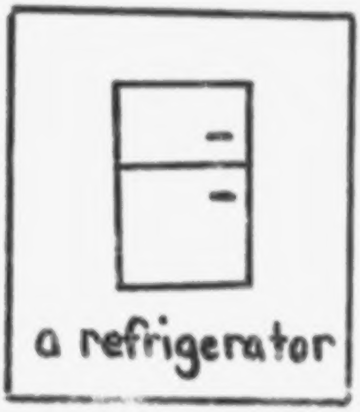

What's in the House Center?








some apples


a refrigerator

Some children will try to make the same plan everyday but in essence they are not really planning or making choices. Adult intervention is necessary in these instances through various means: (1) showing the child similar material in a different center; (2) introducing materials new to the child through small or large group activities; (3) indicating a friend's choice in a different center; and/or (4) closing a center to a particular child. Sometimes limiting the number of children per center will close that center without your intervention.

The planning process encourages children to make choices which helps prepare them for decision-making as adults. This is a skill which many adults have trouble with. Through actual experience from the preschool years into early adulthood children can become more proficient, realistic decision makers.

Self-Selection/Play

The activity period entitled "Self-Selection/Play" should be a major part of the school day. The time element should be 45 to 75 minutes worth of uninterrupted playtime. Keep in mind that children need a minimum of 15 minutes to get started. During this period the children act upon their chosen plan. Each child decides how long he will spend with a material or activity, who he will work with, how he will work with a material and when he will do it. This is the primary time for guiding cognitive growth and developing language skills through the child's chosen media. The strategies for guiding this process are discussed in detail in the section CURRICULAR OBJECTIVES. Warn the children about five minutes before the end of playtime and again at one minute that it is almost time to stop and clean up. The teacher signifies the end of the play period by ringing a bell, singing a song, or any other consistent signal.

Clean-Up

Cleaning up materials that have been used during Self-Selection/Play is an important learning experience for children.

Replacing and sorting materials help develop skills such as grouping, seriating, matching like/similar objects, and one-to-one correspondence. Clean up also helps children become better aware of the location and types of materials available for use in the classroom.

The teacher's role and participation in the clean-up process is vital. She must encourage and guide this activity period utilizing a variety of strategies:

(1) Be sure to signal the beginning of clean up through the use of a bell, flashing the lights or any consistent means you find useful;

and (2) Use a chart to assign areas for cleaning.

and/or (3) Each child cleans up materials he/she used.

and/or (4) Everyone cleans each area together.

and/or (5) Each person picks up a certain number of objects.

and/or (6) Everyone helps put away materials throughout the room.

and/or (7) Assign children to clean centers.

and/or (8) Gather in a predetermined place before beginning clean-up.

Ample time (usually five to fifteen minutes) must be provided for the clean-up process. Heavy cleaning such as mopping water, washing paintbrushes and containers, sweeping sand and washing tables are included in the daily activity period of clean up. Children can also be encouraged to replace materials as they finish with them during the play period. This decreases the amount of disarray during play as well as the amount of time necessary for clean up. Flexibility by the teacher is essential when using playtime for clean up. If the teacher becomes too rigid with this as a rule it will begin to interfere with the learning process.

Some children somehow always manage to either wander or dawdle during clean-up time. These children may need to be physically guided by the teacher to materials that need to be put away.

Recall

The Recall period provides and opportunity for each child to remember and represent something that he did during Self-Selection/Play. Adults help the children provide language for their actions in the recall process. Although recall varies with each child's ability, basically it involves the child first, getting an object he played with or acted upon and second, representing the object or action in some way. The representation level can be talking, tracing, drawing or pantomiming. It is most useful for school-home carryover to have some type of drawing or tracing with the child's oral language written down. However, sometimes time constraints necessitate another type of activity.

Recall can be done individually with children during Self-Selection/Play or as a group either before or after Clean Up. If Recall is done as a group, it begins with each child retrieving a material used during Play. Drawing materials are provided for tracing or drawing the object and/or the actions. The teacher's role is to facilitate the oral representation of the depicted play episode. This will be limited in part by the child's level of language development but it can also be limited by the teacher's choice of questions. The teacher's role is also to expand the child's language according to his individual objectives. The child then is asked to 'tell about his picture' and the adult provides restatements and expansions of his language to be practiced. The final step in the Recall process is writing down the elicited language. The expanded version of the language should be the form written because it is the desired target. The child's actual language can be indicated with underlining or in parentheses. Older children may enjoy printing their own language on handwriting paper from the teacher's model. Again, schedule ample time for each child to recall their play experience fully (usually ten to twenty minutes/seven children).

Small Group

Small Group is a good time to work on anything that

(a) needs more teacher direction or planning, and

(b) will facilitate children learning from each other.

Activities such as language vocabulary unit work, auditory, speech, "news", or thinking activities can be scheduled for this activity period. It is preferable to schedule Small Group as a separate activity rather than pulling children from Play. If you have a teacher's aide or student teacher in your classroom they can each take one small group to work with. This activity period should involve a short time span of five to fifteen minutes and should allow for individualization and self-initiation on the part of the children.

The DPHISC small groups usually involve a language-based activity in the morning and an auditory-based activity in the afternoon. The teacher aide's group is directed towards the development of support skills such as cutting or pasting in the morning and speech games in the afternoon.

Small groups can be managed in a variety of ways including:

1. Using charts to indicate groups.
2. Using pin-on colored tags to indicate groups.
3. Varying or maintaining the group's composition.

Again the schedule chart is a good method for keeping the children aware of the activity periods including Small Group throughout the day.

Large Group

The Large Group activity period is an appropriate time for teacher planned and directed lessons that are less conducive to individualization or choice. The type of activities planned by the DPHISC teachers for this period include stories, music, rhythms, songs, dramatic play, calendar, some cooking activities, gross motor activities and filmstrips. Large Group should involve as short a period of time as the Small Group activity period. A time period of ten to twenty minutes is appropriate. The Large Group activity provides an opportunity for children to interact with more children in a group. This is a good time for teachers to observe children in a different social situation. It usually works best to schedule large group time at the beginning or end of the school day.

Routine or Secondary Activities

These activities would include:

- Bathrooming
- Breakfast
- Hearing Aids
- Lunch
- Snack
- Calendar
- Rest
- Individualized language development
- Individualized speech development
- Individualized social development

They are just as important as the main activity periods of the daily schedule in that they provide short periods of time to develop needed social, speech, and language skills. The primary difference is that these activities are not as cognitively-oriented as the others.

The first seven activities listed above are usually depicted on the schedule chart and act as consistent time markers for both the adults and children in the classroom. As these activities are common to all types of early childhood programs they will not be discussed in any further detail, with the exception of this one note: be aware of the potential of these "routine" activities for working on individual speech, language, social, problem-solving and representation objective.

Speech skills can be developed at anytime during the day when the "Ling" speech system is utilized (Speech and the Hearing Impaired Child, by Dr. Daniel Ling, A.G. Bell Assn. 1976). Some possibilities would be:

(a) after hearing aids are put on
(b) when lining up to go somewhere
(c) when an individual child is making a transition during play, i.e., between play episodes
(d) before and/or after meals
(e) as a choice during play
(f) before taking off hearing aids
(g) as part of the classroom environment, e.g., taped lines on the floor or wall, phonemes associated with a vehicle or animal
(h) as part of a play activity, e.g., while pouring sand, pushing a car, fingerpainting

Teachers sometimes find it difficult to fit speech into play activities because the children don't attend very well or because they are "into their own thing". Following the suggestions for play intervention outlined in THE ROLE OF THE ADULT can help to lessen this problem. If a speech target is presented as a fun, enjoyable experience and as a choice and more likely to be interested and cooperative. Another problem sometimes cited is time. Keep in mind that it is not mandated to practice all of the targets at each encounter; one or two each time is more realistic. With the number of opportunities for speech practice offered by this type of program, one can afford to spread out the targets throughout the day.

Small and Large Group times are also suitable for practicing speech targets. Games, songs, and stories can often incorporate speech skills, particularly the segmental aspects.

Social skill development is another area that can be enhanced at various times throughout the day. Specific objectives for each child can be developed:

(a) during breakfast, lunch and snack
(b) as situations arise in the classroom
(c) while waiting (e.g., at a community bathroom or a lunch line)
(d) during play
(e) during large and small group activities

Survival skills such as the child's name seem to lend themselves best to being part of a routine. For example, children are called one at a time from the breakfast table to get their hearing aids. Once the aids are on, they're asked their name (address, phone, etc.) and then sent back to the table. Once mastered in this context the skill can be more easily generalized to other situations.

Cognition and ultimately language development, the emphasis of our program, like speech and social skills are developed throughout each and every school day. The classroom environment has been set up to provide children with the opportunity to "talk" with other children, adults, and to themselves. The teacher must then take advantage of this enriched environment by working with the children at their level to develop the desired language skills. Language or talking is encouraged and facilitated by the teacher during:

1. Bathrooming
2. Planning
3. Recall
4. Play
5. Meals or snacks
6. Small group time
7. Large group time
8. Hearing aids
9. Calendar

As can be seen, language is developed throughout all of the activity periods in the schedule. Specific strategies will be discussed further in the section CURRICULAR OBJECTIVES.

DAILY SCHEDULE

8:30 -	Arrival/Bathroom		
8:45 -	Hearing Aids/Breakfast/Speech*		
9:15 -	Group (Language, Thinking)		
9:40 -	Plan		
	Self-selection and Guided Learning		
	Centers:	Art	Music/Listening
		Science	Woodworking
		Quiet	Sand/Water
		House	Writing
		Blocks	"Let's Pretend"
10:40 -	Recall		
10:55 -	Clean Up		
11:05 -	Lunch/Bathroom		
11:30 -	Rest or Quiet Activity		
12:30 -	Hearing Aids/Bathroom/Speech*		
12:45 -	"News" and Calendar or Story		
12:55 -	Plan		
	Self-selection and Guided Learning (Centers)		
1:55 -	Recall		
2:10	Clean Up		
2:20 -	Group (Auditory, Music)		
2:40 -	Prepare for dismissal		

*Targets reinforced throughout the day

LESSON PLANS

Where do I begin? That's a question that you're surely asking yourself about the practical use of this curriculum. Well, take a deep breath and read through the following section. It sounds rather overwhelming at first, but with time and practice it gets easier and before you know it, it will become very natural. It might be helpful for you to refer to the Cognitive Framework at the end of this section and/or CURRICULAR OBJECTIVES sections as you read along.

Step 1

For the whole group select a language unit that you intend to develop for the next two to three weeks. Language unit examples would include transporation, home, school, verbs, body parts, animal farms, zoo, and pets, holidays, and clothing. The language unit can also be thought of as a "theme" for the classroom for that particular period of time. This is something that is done typically in most preschool classrooms.

Step 2

For the total group select two to three cognitive objectives from the content area under the headings:

(1) Logico-Mathematical Knowledge, and
(2) Physical Knowledge

Keep in mind that the objectives you choose should correspond to your chosen language unit for the group. For example, let's say that your language unit is "Transportation", a cognitive objective that could relate to that under the Logico-mathematical Knowledge heading would be Seriation-Opportunities to compare groups of objects by quantity (since your materials list includes lots of different vehicles). Next pick an objective from the Physical Knowledge heading. An example of this might be Properties - Opportunities to explore objects using a variety of action patterns (your material list includes a variety of vehicles to push, pull, make lace, etc.). You may or may not want to pick a third objective from either of the two major content areas (Logico-mathematical Knowledge and Physical Knowledge). Now you have two major obstacles out of the way, your group language unit and your cognitive content objectives.

Step 3

At this step you will be selecting individual objectives for students in the areas of:

(a) language development (syntax, semantics, pragmatics),
(b) representation,
(c) problem-solving, and
(d) social skills.

This sound more difficult than it really is. Keep in mind that there are probably two or three children at the same level and so you will be able to select the same objectives for more than one child. The selected objectives should also, if possible, relate to your current group language unit and cognitive content objectives. The results might look something like this:

Language

Tom, Sue, Mary: prompted N-V phrases
Alex, Tim: use possessives
Chris: 5 verbs spontaneously
Terry: use gestures to obtain objects

Representation

Sue, Tim, Terry, Chris: use created materials in play context
Alex, Tom, Mary: create tracings to depict real objects

Problem-Solving: Teacher-constructed

Chris: evaluate solutions
Tom: anticipate outcomes

Sue, Tim, Mary, Alex: confront problems
Terry: observe effects of solutions

Social:

Tom, Mary: verbalize feelings
Tyrone, Terry: tell first name
Tim: use appropriate manners
Alex, Sue: tell when hearing aid is not working

In each case, the objective selected is appropriate and meets the needs of the individual child. Because all children go through the same development, the overlapping of objectives is possible depending on the homogeneity or heterogenity of the group.

Step 4

Select an auditory objective for each of the groups you have previously identified.
For example:

Group #1 will discriminate sounds associated with objects and/or people.
Group #2 will demonstrate the localization skills within six feet in front/back/side.

At this time you may choose to write your activities for the week in the spaces provided on the lesson plan form or come back to that later.

Step 5

Write your chosen group language unit and activities for the next two to three weeks in the spaces provided on the lesson plan form. The DPHISC classrooms often have more than one language group. The same basic activities are done with each of the groups with slight modifications to reflect differences in the targeted vocabulary.

Step 6

This step involves planning the materials to put in each of the centers. It usually requires a great deal of thinking time on the part of the teacher to come up with materials that will relate to the cognitive content objectives and/or language unit for the group. On the planning form used at the model site, there are spaces for up to 12 materials per center for each objective. Brainstorming with other teachers and referring to the Activity Pages section of this manual will certainly fill up some of those spaces but you will probably find many empty spaces at this time. Not to worry - add more ideas as you go along and have an opportunity to observe the children. See the sample lesson plan that follows for an illustration of this step.

Step 7

Plan your large group activities to relate to your group cognitive content objectives and/or individual objectives for problem-solving, representation, and/or social skills. These activities can be listed in the column labelled "Activities". An example would be singing the song "Ten Little Indians" using a visual model (book, puppets, filmstrip) to correspond with the objective of "Opportunities for experiences with the conventional number system".

Lesson plans and objectives selected are kept for a set of period of time, usually two to three weeks. At the end of that time period, new objectives are chosen and the lesson planning process begins again. The materials are put away and new materials are put out that relate to the newly chosen objectives. Keep in mind that the emphasis is on the learning process itself not the mastery of specific skills or objectives.

The lesson planning process usually involves approximately a two-hour block of time. If you're team teaching you would meet with the other members of your team to select the objectives for your two to three week planned period.

As you begin the first week of your lesson plans, put out one to three items in each of your centers (in addition to the "standard" items). At the beginning of the second week - or earlier if you see that the children need more stimulation - add one to three more items to each center. Also, remove any materials that have been used extensively or ignored. Repeat this process at the beginning of the third week as well. Basically, add to and subtract from materials in the centers as you see fit. Keep in mind that too many materials is not conducive learning; children are not likely to be attracted to a shelf cluttered with vehicles nor will they be able to use those vehicles effectively.

One of the things that our teachers have found is that the materials selected may not match what the children do with them. That's quite alright - the children may learn and usually do learn other things. The objectives merely provide a focus and highlight particular concepts. Forced learning is not the purpose of this curriculum or education in general. Remember that children will and do seek out and engage in those experiences that they need to develop mentally.

Cognitive Framework

Content

I. Logico-Mathematical Knowledge

A. Classification

1. Opportunities for free exploration of collections
2. Opportunities for purposeful grouping
3. Opportunities for re-grouping
4. Opportunities to think about two properties of objects simultaneously

B. Seriation

1. Opportunities to actively explore relative differences among two or more objects
2. Opportunities to fit an ordered set of objects to another set
3. Opportunities to compare objects by size
4. Opportunities to compare objects by quality
5. Opportunities to compare groups of objects by quantity
6. Opportunities to arrange several objects in order by size

C. Spatial Relations - Topology

1. Opportunities to explore closed and not closed spaces
2. Opportunities to explore the relationships between "parts" and "wholes"
3. Opportunities to explore distances
4. Opportunities to explore alternate routes to an end point

D. Spatial Relations - Euclidean and Projective

1. Opportunities to explore the way objects fit together
2. Opportunities to rearrange and reshape materials
3. Opportunities to observe different viewpoints from other positions in space

4. Opportunities to experience one's own body
5. Opportunities to actively explore shape

E. Temperal Relations

1. Opportuniteis to explore different rates of speed
2. Opportunities to experience a variety of marked time intervals
3. Opportunities to coordinate past, present, and future
4. Opportunities to recognize cause-and-effect while participating in a sequenced event
5. Opportunities to participate in a sequenced event not involving cause-and-effect
6. Opportunities to reconstruct the temporal order of three to five parts of event

F. Number

1. Opportunities to compare sets of quantities
2. Opportuniteis to add and remove objects from sets
3. Opportunities to explore reversibility
4. Opportunities to explore equivalence
5. Opportunities for experiences with the conventional number system
6. Opportunities to explore parts of a whole

II. Physical Knowledge

A. Properties

1. Opportunities to explore the "permanence" of objects
2. Opportunities to explore the "constancy" of objects
3. Opportunities to actively explore objects in the environment with all of the senses
4. Opportunities to explore objects with a variety of action patterns
5. Opportunities to explore objects in relation to each other
6. Opportunities to use objects for other than their obvious/intended purpose

B. Action Patterns

1. Opportunities to explore body action patterns
2. Opportunities to explore the use of action patterns
3. Opportunities to explore the functional use of objects
4. Opportunities to integrate action patterns

Process/Structure

I. Problem-Solving

A. Levels

1. Recognize cause-and-effect/Anticipate outcomes
2. Perceive a problem/Observe a discrepancy
3. Confront a problem and try a solution
4. Try different solutions
5. Use objects, tools, people to solve problems
6. Observe effects of solutions
7. Transfer learning

B. Types of Problems

1. Teacher-constructed
2. Child-constructed
3. Routine
4. Novel
5. Visible
6. Not visible

II. Representation

A. Sensori-motor/Pre-representation

1. Actual experiences
2. Real objects
3. Routine uses

B. Index

1. Compare real models to objects
2. Using real models
3. Use of models with part(s) missing

4. Creations with obvious shape/form
5. Different contexts
6. Sensory cues

C. Symbolic
(3-D) 1. Dissimilar object substituted
2. Models created
3. Created models used

(2-D) 1. Tracings, drawing, paintings created
2. Created works used

(3-D) 1. Pantomiming with objects
2. Direct imitation
3. Pantomiming without object
4. Deferred imitation
5. Depicting movement
6. Depicting function
7. Depicting looks
8. Sounds and objects
9. Sounds and actions
10. Sounds and animate objects
11. Shortened versions of real events
12. Dramatic play
13. Objects as play characters

D. Sign
1. Awareness
2. Receptive language
3. Expressive language
4. Language in role playing
5. Understanding other systems
6. Using other systems
7. Oral language written down
8. Recognizing written language
9. Writing
10. Reading

Language unit Develop language related to transportation

Cognitive: Properties - Explore objects using a variety of action patterns	Cognitive: Seriation - Compare groups of objects by quantity
Center: Art *Various vehicle patterns for tracing *Scrap material for vehicle construction (boxes, spools, wheels) *Paint with small cars on paper in gift box	Center: Art *Glue bottle caps on strips of paper - compare to others
Center: Woodworking *Scrap foam and wood for boat constructions *Dowel rods, wheels and wood scraps for vehicle construction	Center: Woodworking *Cubes, Bobbins and Beads *Pound bottle caps into numbered pieces of wood
Center: Quiet *Lace vehicle lacing cords *Use clothespins to pick up various small objects	Center: Quiet *Teddy Bear counters *Teacher-made money cards using pennies *Train and train track (lang.) *Small objects, sorting tray labeled with numbers 1-5 *Numberite 1-10
Center: Blocks *Variety of vehicles in various sizes *Fisher price airport play set *Road map with cars, trucks, motorcycles to drive along road *Hang ballon from ceiling - Hit with hand, kick or use racquet	Center: Blocks *Beads for filling dump trucks

Language unit Develop language related to transportation

Cognitive: Properties - Explore objects using a variety of action patterns	Cognitive: Seriation - Compare groups of objects by quantity
Center: Sand/Water *Scoop up small objects with a fish net *Blow bubbles with funnels and tubes *Steam shovel and bulldozer for moving sand	Center: Sand/Water *Divide water table and float - various number of boats in water - compare
Center: Problem-Solving *How do you make steam shovel pick up sand?	

Individualized Objectives	Activities
Representation Tyrone - Use art/construction material to form creations with obvious shape/form. Chris - Create tracings, drawings, and painting to depict real objects and experiences. Tom - Create models of real objects from art/construction material. Mary - Use object dissimilar to real object in play. Alex - Use art/construction materials to form creations with obvious shape/form. Terry - Use created models in play context. Tim - Use created models in play context.	Large group 4-15 to 4-19 Monday: Sing song with visual model, Ten Little Indians Tuesday: More/Less Game - Locate items in room using picture model. Count the number of items found. Indicate which items have more/less (hearing aids, clock, chairs, cups) Wednesday: Make model of vehicle of choice from clay. Thursday: RAPHYT - Play game "What can we use in place of..?" (chair, light). Decide as a group which item would work best. Friday: Part to whole relationships - indicate vehicle of which only a part is seen.
Language Tyrone - Spontaneously produce five verbs Prompted N-V phrases Chris - Prompted Neg.-N phrases spontaneously produced V-Adv. phrases. Tom - Spontaneously produce Prep.-N phrases Adj-Adj-N phrases. Mary - Prompted Neg.-N phrases spontaneously produce N-V phrases. Alex - Spontaneously use possessives in four to six word sentences. Terry - Spontaneously produce five new verbs prompted N-N phrases. Tim - Spontaneously use quantifiers in four to six word sentence.	Notes: 4-15 to 4-19 black pen (Terry absent all week - flu)

Individualized Objectives	Activities
Social Tyrone - Produce full name on request. Chris - Indicate when hearing aid is not working. Tom - Verbalize feelings. Mary - Verbalize feelings. Alex - Interact with peers in an acceptable manner. Terry - Use appropriate manners with reminder. Tell full name on request. Tim - Apologize to others without reminder.	
Problem - Solving Tyrone - Observe the effect of attempted solutions. Chris - Evaluate solutions to problems. Tom - Confront a problem and try at least one solution. Mary - Evaluate solutions to problems. Alex - Recognize cause/effect relationships. Anticipate outcomes. Terry - Evaluate solutions to problems. Tim - Perceive a problem/ observe a discrepancy.	

Language Groups #1, 2, 3

Objectives Develop language related to transportation (Teacher)	4-15 to 4-17 Make milk carton boats and float in water. Use sound/pal associated with a boat.	4-18 to 4-22 Make paddies for large carton boat. Sing Row Your Boat while paddling.
Objectives Develop language related to transportation (Aide)	4-15 to 4-17 Read aloud the story Busy Boats	4-18 to 4-22 Make rockets from paper towel rolls and aluminum foil.

Mon.	Tues.	Wed.	Thurs.	Fri.	Auditory Groups
Teacher made tape of various sounds. Children indicate what could have made the sound. DLM tape and pictures. Children locate picture associated with sound heard from choice of 6.	Taped music. Teacher hides recorder in room within 6 ft, front/back/side. Children locate tape. Music box. Children locate music box hidden in room with 3 ft. in front/back.	Peabody tape Brainstorming sounds. Children listen to tape and indicate different items that could have made the sound. Peabody tape and pictures. Children locate picture associated with transportation items.	Teacher made tape "Come and Find Me". Children locate tape recorder in room within 6 ft. front/back/side. TM tape and pictures associated with sound heard related to people and vehicles	Large Group Music/Rhythms Sing song the Wheels on the Bus and the Transportation song.	Objectives Group #3 (Teacher) Demonstrate localization skills. Indicate one or more items that could have made sound. Objectives Group #2 (Aide) Discriminate sounds associated with objects/people. Demonstrate beginning localization skills.

Teacher Planning

One of the most important considerations of teacher planning is the preparation time involved when beginning your two to three week lesson plan. Materials must be put away and new materials must be put out. The OPHISC teachers usually arrive at school one hour before the children arrive on the first day of a new plan. This provides ample time to put out the new materials required for the chosen objectives.

When team teaching with another teacher time must also be set aside for choosing objectives and brainstorming language, cognitive and auditory activities. The public school schedule provides coordinating periods which are utilized for this planning process. If your school schedule does not allow for this, time must be set aside before or after school once every two to three weeks for this planning. Keep in mind that lesson plans are written only once for the two to three week planned period.

Another consideration that must be addressed by the teacher is long-term planning. Group objectives are rotated throughout the course of the school year based upon the language unit selected and the children's interests and abilities. An attempt is made to cover as many areas as possible and to return to earlier objectives at different times in the year. There is not a pre-determined year plan, but we have found it helpful to keep a record of what objectives we have covered. Remember that the objectives are a focus for development not skills to be mastered.

The individual objectives in the areas of representation, language, and problem solving are set up in a sequential manner. These objectives can be chosen by the teacher one after the other in the appropriate sequence.

COGNITIVE EXPERIENCES RECORD

I. Logico-mathematical Knowledge

A. Classification 1. Free exploration				
2. Purposeful groupings				
3. Re-grouping				
4. Two properties				
B. Seriation				
1. Relative differences				
2. Fit ordered sets				
3. Compare by size				
4. Compare by quality				
5. Compare by quantity				
6. Order by size				
C. Spatial Relations-Topology				
1. Closed/not-closed				
2. Parts and wholes				
3. Linear arrangements				
4. Distances				
5. Alternate routes				
D. Spatial Relations-Euclidean and Projective				
1. Fitting together				
2. Rearranging and reshaping				
3. Different viewpoints				
4. One's own body				

5. Shapes

E. Temporal Relations
1. Different Speeds
2. Different time intervals
3. Coordinating past, present and future
4. Cause-and-effect sequence
5. Not cause-and-effect sequence
6. Sequenced parts of an event

F. Number
1. Compare sets
2. Add or remove from set
3. Reversability
4. Equivalence
5. Conventional number system
6. Parts of whole

II. Physical Knowledge
A. Properties
1. Permanence
2. Constancy
3. Sensory exploration
4. Exploring with action patterns
5. Objects in relation to each other

6. Use objects for other than their intended purpose

B. Action Patterns

1. Body action patterns

2. Use of action patterns

3. Functional uses of objects

4. Integrating action patterns

REPRESENTATION

Level A. Sensori-motor/ Pre-representation								
1. Participates in actual experience	1.							
2. Uses senses to explore objects	2.							
3. Uses objects/materials routinely	3.							
Level B. Index								
1. Compares models to objects	1.							
2. Uses models in play	2.							
3. Uses models with part(s) missing in play	3.							
4. Uses materials to form creations with obvious shape/form	4.							
5. Uses objects in different contexts	5.							
6. Recognizes object from sensory cue	6.							
Level C. Symbolic								
3-D								
1. Uses dissimilar model for play	1.							
2. Creates models	2.							
3. Uses created models in play	3.							
2-D								
1. Creates tracings, drawings, paintings	1.							
2. Uses tracings, drawings, paintings in play	2.							

REPRESENTATION

Action								
1. Pantomimes using object	1.							
2. Directly imitates actions	2.							
3. Pantomimes without object	3.							
4. Imitates actions without object/person being present	4.							
5. Uses actions to show how something/someone moves	5.							
6. Uses action to show what something/someone does	6.							
7. Uses action to show how something/someone looks	7.							
8. Produces object's sound	8.							
9. Produces sound to pretend to do something	9.							
10. Produces sounds to pretend to be animate being	10.							
11. Short, simple play sequence	11.							
12. Dramatic play	12.							
13. Uses inanimate objects as characters in play action	13.							
Level D. Sign								
1. Aware of language as representative	1.							
2. Receptive language	2.							
3. Expressive language	3.							

REPRESENTATION

4. Uses language appropriate to role in play them
5. Understands variety of representation systems
6. Uses a variety of representation systems
7. Aware of written language
8. Recognize written forms
9. Write
10. Read

4.							
5.							
6.							
7.							
8.							
9.							
10.							

PROBLEM SOLVING

A. Levels

1. Recognize/Anticipate outcomes
2. Perceive
3. Confront. Try one solution
4. Aware of different solutions
5. Usefulness of others and objects
6. Observe effects
7. Evaluate
8. Transfer Learning

B. Types

1. Teacher-constructed
   Child-constructed
2. Routine
   Novel
3. Visible
   Not Visible
4. Reversible
   Not reversible

TIME AND WORK MANAGEMENT

Managing time and work effectively is always a concern for teachers but in implementing this model it becomes critical. More "class" time is spent directly interacting with children and more management tasks must be accomplished outside of "class" time. Do not despair, however! It is possible to effectively fulfill your responsibilities within the confines of your regular working day once you learn 'how to do more in less time'. There are numerous books available on this topic, but the following basic strategies are offered until that reading becomes a priority.

1. Define your responsibilities and priorities.
2. Write it down.
3. Have a "master" TO DO list for any and all ideas, assignments, wishes, projects, errands, etc. Keep it handy such as in a pocket notebook. Review it daily.
4. Have a "daily" TO DO list. Be specific about the tasks that you want to accomplish. Prioritize. Be realistic about the time demands of different tasks and your time availability. Set time limits when necessary. Leave time for the unexpected. Consider your energy cycle. Put the list on something that will get your attention.
5. Identify any daily impediments and try to minimize them.
6. Concentrate on one item at a time.
7. Use a reminder file or calendar. Try to anticipate/preplan as much as possible.
8. Standardize: decide on routine ways of handling tasks or requests that occur regularly. This includes dealing with papers: toss it, refer it, act on it, or file it immediately. It also means using forms.

9. Have a place for everything.

10. Consolidate: do all similar activities at once, e.g., all phone calls, all IEPS, all cleaning. If you work closely with another person, don't make contact for a single item. Collect items and then meet with the person.

11. Be aware of 'new' tasks that come with this approach:

    - -time for putting away and setting up materials in the centers at the beginning of a new unit (usually one hour)
    - -time for changing materials each week (usually fifteen minutes)
    - -time for 'lesson planning' (usually two hours for every two to three weeks)
    - -time for observing
    - -time for writing and copying school-home carryover materials (five minutes to two hours weekly)

IV. THE ROLE OF THE ADULT IN THE CLASSROOM

THE ADULT AS FACILITATOR/GUIDER OF LEARNING

Typically the learning activities of special education classrooms can be described as "directed learning", "rote learning" or "drill and repetition". The nature of these activities determines the role of the adult (as well as the roles of the children). In contrast, the learning activities suggested in this model program can be described as "guided learning" or "discovery learning". The difference in the role of the adult is highlighted in the following comparison:

	Guided - Discovery		Directed - Rote - Drill
(1)	Adult has less control (more child self-control)	(1)	Adult has majority of control
(2)	Adult plans and sets up environment but child can change and/or add to	(2)	Adult plans and sets up environment
(3)	Children, not adult, assign roles	(3)	Adult assigns roles
(4)	Children self-direct	(4)	Adult directs activity
(5)	Activity and materials as source of knowledge and information	(5)	Adult as source of knowledge and information
(6)	Environment as authority	(6)	Adults as authority
(7)	Children make own decisions and solve problems	(7)	Adults make decisions and solve problems
(8)	Children and adults converse	(8)	Adults do most of talking
(9)	Rules imposed by self, materials and culture	(9)	Adults impose rules and discipline

Guided - Discovery	Directed - Rote - Drill
(10) Self (intrinsic) motivation	(10) External motivators manipulated by adult
(11) Child's reality	(11) Adult reality
(12) Child meets own needs	(12) Adult tries to identify and meet child's needs - Adult meet own needs
(13) Structure provided by environment	(13) Adult imposes structure

When an adult accepts the role of facilitator or guider of learning, she is basically recognizing the learning needs of the young child. She is recognizing that the learning activities are for the child, not for the adult. The primary goal of the facilitator/guider is to stimulate the child's own construction and discovery of knowledge. This means thinking about the child's needs and then responding and intervening with playfulness and respect and without interfering or distorting the child's play.

STRATEGIES FOR FACILITATING GUIDING LEARNING

Many of these strategies have been mentioned elsewhere in this manual but they are repeated here to bring a focus to the role of the adult. In a program that is highly child-centered, as this one is, the role of the adult may not always be apparent. Some adults may interpret their role as non-existent, e.g. stand around and observe only. To the contrary, the role of the adult is very important and very active but in a less obvious, less directive fashion. To strike this balance between active and unobstrusive is not easy in the beginning but comes with experience and understanding.

Attitude. The importance of the attitude conveyed by the adults in the classroom should not be underestimated for children pick up on this and are influenced by it. Assume the attitude of a "thinking teacher": observe, assess, analyze, plan, self-evaluate, hypothesize, and evaluate. Demonstrate genuine curiosity and interest in problem-solving, observations, and interactions. Model playfulness, have a good time, explore, create, discover, pretend, construct, manipulate, change, and practice. Minimize the adult as the "ultimate authority"; allow children to think and act for themselves. Assume the viewpoint of the child. Be honest.

Emotional Support. Closely related to the "attitude" of the adults is the emotional support that they can provide. Again, its presence or absence can make a very significant difference. Emotional support begins by providing a comfortable, secure environment where children know that it's o.k. to make mistakes and that in fact we can learn from our mistakes. Setting limits and maintaining them consistently helps children to feel safe and in control of themselves. Offer children alternatives to any unacceptable behaviors; this clearly says that its your actions, not *you*, that is not o.k. Following up on directions and promises is always important in establishing and maintaining trust. Acknowledge and support children's efforts by imitating their actions, making a verbal comment specifically related to the action, or by making a brief physical contact such as a pat on the back.

Materials. The adult provides materials that are open-ended; these materials offer a variety of options in the way they can be used by different children or by the same child. The adult also introduces new materials along the way in order to extend the child's learning. For example, the adult may have originally provided a set of different rhythm instruments at the Listening Center. As she notices that the children (or a single child) are ready for some auditory awareness, she may bring out a blindfold. The blindfold was not part of the original plan for the environment that day but the adult introduced it because the moment of readiness was at hand. The adult encourages children to discover the uses of ojbects through exploration but she also highlights potential uses that might not be readily apparent and that might be significant in extending the child's learning. Very early in life children become aware of "routine uses" of objects and tend to use an object repeatedly in the same way. An example of this would be the child who uses a straw for ingesting liquids. The adult models using the straw for blowing, for building, for squirting into with an eyedropper or so on.

Active Learning. The adult provides the opportunities for children to interact with materials in a direct, immediate, sensory-motor fashion. Whenever possible these activities are self-initiated and self-controlled. The adult tries to maximize the child's participation in the planning and implementation of all activities. This interaction is an integral part of Self-Selection/Play but it may be more challenging to involve children in planning and carrying out Small and Large Group activities.

Problem Solving. In an atmosphere of trust and acceptance, children are willing to take on the challenge of problems and the accompanying possible mistakes and failures. Through active exploration children construct many problems on their own but the adult can expand and extend the child's problem solving repertoire by also setting up problems. Problems can be set up through the use of materials, actions, or statements that challenge the child's thought. This could involve the unexpected (e.g. a Jack in the Box), a discrepancy in the environment (e.g. a bucket that won't hold water - because it's been poked with holes) or a choice of two possible solutions (e.g. th- car can reach the garage via the tunnel or the bridge). The adult observing and/or interacting with the child during this problem solving must maintain an accepting attitude and give consideration to the child's point of view and cognitive level of development.

Choices. The adult plans an environment that includes choices in its materials, activities, structure and interactions. However, the adult also does not offer choices if they don't exist. For example, when there is a fire drill, all children must leave the building by a prescribed door; there are no choices and none should be offered.

Time. The adult provides sufficient time for incubation, exploration, problem-solving, repetition, and self-help because these activities are recognized as valuable for learning.

Transfer of Learning. The adult sets up similar problems in different settings over the course of the year. An example might be what to sit on instead of chairs--at the snack table, in WOODWORKING at the Art Center, on a picnic. The adult provides opportunities for similar experiences with different materials over the course of a year. An example might be stirring - water, sand, foamies, pudding, jello, pebbles. In these ways the adult facilitates the transfer of learning of learning across content areas.

Interactions with Children. The interaction of the adults with children is a key strategy but one of the more difficult to implement because the adult must achieve a "happy medium" of intervention. Too much interaction will stop play but not enough interaction will keep play from achieving its potential. Some of the cues that suggest adult intervention would be appropriate include:

- When the child is doing nothing for and extended period of time.
- When the child leaves something unfinished.
- When a child is wandering aimlessly.
- When a child is bouncing from center to center.
- When a child is looking for something to do.
- When the child invites you.
- When a child is finished with something and ready to start something new.
- When the child can almost do something but not quite.
- When the child wants to use materials that need adult supervision.

When the adult observes one of these cues, she or he may then begin the process of interacting. The first step is to observe. Focus on the action, what the child is doing not on a product or what you think the child should be doing. The next step is to ask permission to join the child's play. This can be done nonverbally as well as verbally. Stay only if the child accepts your presence and responds positively to your overtures. If the child is not interested, the adult should withdraw. The next step is to follow the child's lead; let him make the first move and then you imitate it. Strive to be a player not a director. When the time is right - and this can be the tricky part - make a slight change in your imitation of the child. Gradually create a shift so that the child is imitating you. It is then possible to extend or elaborate on the child's original intention. When the child is no longer in a state that can benefit from adult intervention (i.e., the cues described above), the adult should withdraw. The entire episode may last only two to three minutes although it may last longer. The type of program being described in this manual requires a high rate of personal interaction so the adult makes quick "check-in" contacts with each child frequently. The time and number of more intensive interactions, as described in this section, are limited. The adult must be aware of all that is happening in the room at all times.

Talking with Children. An integral part of interacting with children is talking with children. The strategies for facilitating language development are discussed in the next section, CURRICULAR OBJECTIVES. In terms of interaction, however, these guidelines may be helpful.

- Ask questions related to the child's activity or problem.
- Ask questions that will elicit more than a single-word response.
- Ask questions to stimulate the child's observations.
- Ask questions that will help the child recall and associate prior experiences.
- Answer questions.

In general, the verbal interaction with children parallels the physical interaction in that it is direct and immediate.

Individualize. The type of program described in this manual lends itself very well to individualizing from planning to implementation because it is child-centered rather than adult-centered. It begins with the selection of "objectives" for representation, problem-solving, language, auditory, and speech. These objectives are based on each child's individual needs and interests and provide a focus for his activities. Writing the objectives on wall charts or tags assists staff members in being aware of planned individualization. However, there is flexibility in the implementation of plans; adults revise plans as they follow the child's lead. To do this requires a learning environment that is not fixed but is responsive to individual needs and learning possibilities as they arise. The use of a variety of open-ended materials makes a responsive learning environment possible without the adult being required to constantly add or change materials.

Perhaps of greater concern to special educators, however, is how to document all of this individualization. The staff at the model site have developed a number of forms and techniques towards this end that have stood the test of "the auditors". The selection of individual objectives is documented on the "Cognitive Experiences Record" and the "Record of Representation and Problem Solving Experiences" as well as the curriculum's performance objectives for language, speech, and auditory development. The implementation of these objectives are recorded on Language Observation sheets and Activity Observation sheets posted in each of the centers. Some of the teachers supplement this information with anecdotal notations in a pocket notebook. A more permanent record for language samples is obtained by transferring from the observation sheet to a language log. The "Cumulative Record of Speech Skill Acquisition" by Dr. Daniel Ling is used as a permanent record of speech samples. Audiotapes and photographs of the children's problem-solving and representational activities may be useful as samples of those experiences. Achievement of objectives is documented by the evaluation instruments discussed later in the manual. Copies of forms used for documenting individualization can be found in the section marked FORMS.

THE ROLE OF THE CHILD

The DPHISC approach has been described in this manual as child-centered and play-based with adults taking the role of facilitator or guide, but what exactly are the children supposed to be doing? -- or more correctly, what will the children have opportunities to do? The primary source for this information can be and should be the findings of child development experts. An overview in general terms is provided here for immediate reference but it is strongly recommended that adults working in early childhood settings - regular or special -- have a broad-based understanding by way of extensive readings (a bibliography follows) and practical experience with non-handicapped children.

Overview of Child Development

By Age 1

- -walks holding on
- -uses spoon
- -understands "no"
- -waves "bye-bye"
- -is learning to use muscles of speech mechanism
- -babbles
- -produces speech segmentals
- -uses one sound or groups of sounds consistently with an intent to communicate
- -is learning by watching and imitating
- -is learning through sensory and motor exploration
- -understands object permanence

By Age 2

- -perfecting gross motor skills
- -runs
- -doesn't watch where he or objects are going
- -produces two-word utterances
- -produces all vowels but not all consonants
- -uses the pronouns "I", "me", "mine", "you" but usually incorrectly
- -understands hundreds of concrete words
- -expressive vocabulary of between 50 and 200 words
- -follows simple directions
- -echoes adults if doesn't understand
- -can unwrap and peel
- -zips zipper
- -completes two to three piece puzzle
- -learns by manipulating objects
- -creates order in concrete ways
- -recognizes size differences
- -understands cause-and-effect
- -learns by trying new things: watches, copies, repeats for practice

- parallel play
- has difficulty dealing with anger and frustration

By Age 3

- rides small tricycle
- ascends/descends stairs one foot at a time
- good hand and finger coordination
- can undress and dress major clothing items, including unbottoning
- follows up to three simple directions
- tells about what's happening in storybook pictures
- produces three to four word utterances, nongrammatical
- rapidly increasing vocabulary (50/month)
- intelligible to non-family members
- completes six to twelve piece puzzles
- matches the color red
- understands concept of one
- starts to count
- repeats rhymes and jingles
- is learning through make-believe
- is learning from representations as well as concrete experiences
- is attending and concentrating longer
- is learning to wait
- makes brief social contacts
- enjoys helping with chores
- needs adult supervision if playing with other children; parallel play is o.k.
- has difficulty making choices
- unpredictable in behavior

By Age 4

- coordination may be poor because of growth changes
- runs, hops, jumps
- can dress self except for shoe-tying
- can feed self except for pouring from a large pitcher

- -talks constantly
- -asks questions about everything
- -expressive vocabulary of about 1500 words
- -uses four to five words to express thoughs, not necessarily with "adult" grammar
- -can recall recent past events
- -can match pictures
- -learning about people as well as things
- -counts to three or more
- -plays cooperatively with some imagination
- -ready for cooking and baking experiences
- -easily frightened by "monsters"

By Age 5

- -gallops
- -rides a two-wheel bike with training wheels
- -cuts on the line
- -copies some capital letters
- -produces five to six word sentences, mostly with "adult" grammar
- -asks word meanings
- -rote counts at least to 30
- -matches primary colors
- -has sense of seasons
- -violence and scariness in storytelling
- -uses appropriate manners words (e.g. please, thank you)
- -plays games
- -understand the need to share and take turns
- -interested in and ready for group activities
- -responds to verbal limitations
- -sociodramatic play; enjoys dressing up and performing (no adults please!)
- -has "bad" dreams

By Age 6

- -skips
- -attempts all kinds of physical feats
- -moves with rhythm to music

-holds writing utensil correctly

-hand dominance established

-copies more capital letters

-can complete 26 - jigsaw puzzle

-expert builders

-speech is fluent except for possible /s/, /v/, /f/, and /th/

-has expressive vocabulary of about 2200 words

-produces plurals, pronouns, and tenses correctly in well-constructed sentences

-interested in new words

-can tell "how many"

-matches numerals with quantities

-tells what he's going to draw before doing it

-strives for realism in drawings

-more intent and decisive

-can't resist taking things that belong to others

-likes to finish what is started

-has definite likes/dislikes in foods

-recreates roles of "doers" in dramatic play

-protective toward younger children

-has "bad" dreams

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With this information then, adults understand that it is the role of the child to:

- make choices: this opportunity should be exercised whenever possible, including but not limited to the planning of activities, the selection of materials, the use of materials, the selection of co-players, the "when" of activities, the "where" of activities, the duration of activities, the resolution of problems, and changes in the physical environment. The child who repeats an activity or solution to the exclusion of other possibilities is not making a choice.

- initiate his own activities: The child takes responsibility, makes choices, and acts on what he wants to do without waiting for an adult to tell him what to do.

- direct his own activities: The child follows through on his self-initiated activity with or without adult input.

- be actively involved: The child explores and constructs as he participates directly and immediately in sensory, motor, and representation experiences. The child does not stand off on the sidelines.

- solve his own problems or find the necessary "outside resources" (e.g. another child, an adult): The child views himself as able to solve his own problems from dressing to figuring out why the flashlight doesn't work. The child does not view himself as dependent on adults to solve his problems but recognizes that they may play a useful role in some situations.

- determine his own stimulus and responding behavior: The child makes a choice in the selection and use of materials. The child is not limited to an adult-selected material nor an adult-determined use of that material.

- change and add to his environment: The child will ask for materials that are not "out", move materials to new locations, use materials in new contexts, interact with different children, bring materials from home, rearrange furniture or in other ways change and/or add to his environment in order to meet his own learning needs.

-work at his own level and learn at his own rate: The child selects and uses materials to match his learning needs. These materials and/or their usage may not be the same as any other child in that classroom.

-reflect on his actions through language, repetition, or representation: At the close of an action or action sequence, the child briefly repeats the action and/or represents it in order to compare, contrast, organize and coordinate what he has learned.

-work for an extended period of time with a chosen material: The child follows through with his plan, focuses on a primary activity and completes what he starts. The child problem solves in order to continue his plan, broadening and extending the original idea. The time period involved should gradually increase from two minutes to forty-five minutes.

-use materials appropriately: The child uses materials to explore, discover, and construct. The child does not use materials in a manner that will harm other children, the environment, the materials, or the child himself. Whenever possible the child uses materials in such a way as to minimize clean-up.

-participate in routine activities including eating, cleaning up, dressing, toileting, calendar, hearing aids, rest, and "jobs".

-care for his own needs: The child will dress/undress, feed, toilet, and clean himself according to his developmental level.

-communicate with adults and peers: The child will ask questions, answer questions, greet, protest, label, command, request, gain attention, express comments, express rejection, gain information, indicate wants, indicate comprehension, share information, express intentions, express feelings, express problems offer solutions. The child will use the surface form (syntax) that is appropriate for his developmental level and for the listeners.

-interact with peers: The child will play with the other children at a level that is developmentally appropriate.

-interact with adults when appropriate: The child will be open to appropriate, unobstrusive requests to play from adults. The child will initiate play interactions with adults but will not be limited to only adult interactions.

KEYS FOR SUCCESS

These ideas are repeated here to focus on their importance for the successful implementation of this type of program and to highlight the role of the adult in their implementation.

Organization

- lesson plans
- storage
- materials
- classroom environment
- documentation

Awareness and understanding of child development

- planning
- classroom environment
- materials

Observation skills

- interactions with materials
- interactions with peers
- interactions with adults

Change

- materials
- contexts
- locations
- combinations
- uses

Flexibility

- planning
- scheduling
- expectations
- implementing
- clothing

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Time

- -preparation
- -problem solving
- -decision making
- -self care
- -practice

Playful, thinking attitude

- -adults
- -children

Practice

- -plans
- -problems
- -questions (adults) and answers (children)

V. CURRICULAR OBJECTIVES

COGNITIVE

CONTENT:

1. Logico-Mathematical Knowledge: Providing experiences for children to construct or invent relationships among and between objects. The changes that come about through the child's actions are of greater importance than the nature of the objects.

   A. Classification: Providing experiences for children to group or arrange objects. The criteria for these groupings will probably not be clear to the adult observer.

      1. Opportunities for free exploration of collections. The adult provides a collection of items and some containers to elicit groupings. The collection of items may be related - by adult criteria - (e.g. different types of nuts or different types of round objects) but they do not need to be (e.g. a "junk box: pom-pom, stone, crayon, leaf, paper clip, rubber band, battery, spoon, crayon). The child has the opportunity to actively explore and investigate the materials and perform the action of arranging the items in piles or groups. Through this process he may become aware of similarities and differences.

      2. Opportunities for purposeful groupings. The adult provides a collection of items carefully chosen to provoke a grouping according to a certain criteria. The criteria reflect levels of increasing abstractness:

         (1) identical objects

         (2) similar objects (e.g. football, baseball, nerf ball)

         (3) objects that "go together" (e.g. cup and saucer)

         (4) objects of same color

         (5) objects of same shape

(6) objects of same size

(7) objects that are functionally related (e.g. leash, collar, dogbone, dogdish)

(8) objects that are categorically related (e.g. furniture: chair, bed, stove, table)

However, unless the child has sufficient language to describe the rationale of his groupings, the adult can only infer the chosen criteria or if it is used consistently. It is preferable, then, that the adult not intervene in these activities. The child will actively sort the objects and may become aware of their similarities and differences.

3. Opportunities to re-group materials.

The adult provides a collection of items carefully chosen to provoke two different groupings according to two different criteria. For example, a collection of crayons can be sorted by colors or it can be sorted by sizes (using thick and thin). The CAUTION of the above objective applies here also: unless the child has sufficient language to be able to describe the raionale of his grouping, the adult can only infer the criteria or the consistency with which its followed. The adult can, however, at this level intervene in terms of encouraging the child to group the objects "another way". Through the process of this sorting the child may become aware of how objects may be simultaneously the same and different.

4. Opportunities to think about two properties simultaneously. The adult provokes groupings that use the criteria that an object is "both ____ and ____", (e.g. "round and red" or "red and something to eat with"). Matrix are suitable for these experiences.

B. Seriation: Providing experiences for children to invent relationships between objects and to arrange objects in series according to their relationships.

1. Opportunities to actively explore relative differences among two or more objects. The adult provides a collection of materials carefully chosen to highlight obvious, gross differences in size, (length, width, height, area), quality (color, texture, speed, temperature, sound, weight), or quantity (discrete, continuous). The child actively explores these materials and becomes aware of relative differences, but in one direction only. That is, given a spoon, everything else is bigger or everything else is smaller.

2. Opportunities to fit one ordered set of objects to another set. The adult provides two sets of objects which fit together and which are graded by size, quality or quantity. A set of pots (small, medium, large) with its set of lids would be example of two sets of objects graded by size that fit together. There should be no more than four objects to a set and its preferable that the objects be a usable part of play rather than something artificially contrived. The child should actively fit the two sets together, not just match them. He may try to arrange the sets in some order but that isn't the primary focus of this experience.

3. Opportunities to compare objects by size. The adult provides an item in three or four different sizes. "Sizes" includes big/little, large/small, tall/short, high/low, long/short, fat/thin, and narrow/wide. The furniture in the story "Goldilocks and the Three Bears" would be an example. The child compares the sizes of the given item by using them in his play. He may put them in order through trial-and-error but this is not the primary focus of these experiences.

4. Opportunities to compare objects by quality. The adult provides an item in three degrees of a quality. "Quality" may include soft-hard, hot-cold, loud-quiet, fast-slow, smooth-rough, dark-light, old-new, wet-dry, heavy-light, blunt-sharp, and high-low. Singing a song at three different speeds or three different pitches would be comparing the songs by quality. The child compares the quality of the objects by actively using them in his play. He may put them "in order" through trial-and-error but this is not the intent of these experiences.

5. Opportunities to compare groups of objects by quantity. The adult provides up to four different amounts of a given item. The "quantity" may be discrete (able to be broken down into countable parts, such as buttons, blocks, people) or continuous (measurable and pourable but not countable, such as sand, water, sugar). The adult needs to provide some way of structuring or containing the materials into groups (of differing amounts, of course) that can then be compared. For example, buttons can be made available in baby food jars and sand can be accompanied by measuring spoons. The language for comparison may be specific or nonspecific. The jars of buttons may be compared as "having two, three, or four buttons" (specific) or as "having more buttons or less buttons" (nonspecific). The spoons of sand may be compared as "being more or less" (nonspecific) or as being one or two teaspoons (specific). The child invents relationships between the groups of objects based

on their quantity by actively using the materials in his play. He may order the sets by trial-and-error but that is not the intent of these experiences.

6. Opportunities to arrange several objects in order by size. The adult provides a set of materials that can be put in a series ordered by size. "Size" includes big-little, tall-short, high-low, long-short, fat-thin, and narrow-wide. The exact number of objects in the set is arbitrary initially, but eventually should include five or more. The different-sized (and colored) rings on a peg, typically found in early childhood settings would be appropriate for this type of experience. The child arranges the objects in a series according to the size relationships he has constructed. He may also be encouraged by an adult to make predictions about relative positions. For example, asking "what ring do you think will be next?" before the child has a chance to try it out.

C. Spatial Relations - Topology: Providing experiences for children to invent relationship between points, lines, and regions that are not altered by compression, expansion, or tilting. These experiences enable children to construct knowledge about the properties of space that stay constant regardless of whether the line (or point or region) is stretched, twisted, tilted or shrunk. Included would be relationships of enclosure, separation, proximity, order, and continuity. This is a very difficult concept to put into basic terms but the following experiences may be of help.

1. Opportunities to explore closed and not-closed spaces.
The adult provides materials and experiences, some of which are closed spaces (regions, lines) and some of which are not-closed. A "closed" space is enclosed, self-contained, the starting point equals the end point. A circle, a tent, a hoola-hoop, and the letter "O" are "closed" spaces. A space that is

"not closed" has an opening, is not fully enclosed and its starting and end points are in different places. A straight line, a tube, a tub and the letter "C" are "not closed" spaces. The child actively explores these spaces and invents relationships of "inside", "outside", "in", "out", "open", and "closed". He becomes aware of boundaries and he becomes aware of the ways closed and not closed spaces are the same and the ways they are different.

2. Opportunities to explore the relationships between "parts" and "wholes". The adult provides materials that (a) are a "whole" with observable "parts" (e.g. whole--brush, part--bristle) or (b) are "parts" to make up a "whole" (e.g. unit blocks--parts, fence--whole). The child will actively explore and use the part(s) of a whole and become aware of their relationship. The child will actively separate components and reverse the action. The reconstruction may be the original "whole" or a new and different "whole". The "parts" used may be the originals or new. For example, the child takes apart a garage made from Lincoln Logs. He may then rebuild the same garage with the same materials (original whole, original parts). He may build a boat with the Lincoln Logs (new whole, original parts). He may build a garage with unit blocks (original whole, new parts).

3. Opportunities to explore distances. The adult provides materials and activities that involve movement between two points (lines or regions) or making a judgment about the area/distance between two points (or lines or regions). The child explores the distance between two points (or lines or regions), he changes his viewpoint and he invents relationships of "near", "far", "next to", "beside", "on", "together", "apart", "near", "far".

4. Opportunities to explore linear arrangements. The adult provides materials that are likely to provoke a pattern. The adult may also provide a model pattern to be copied. The adult initially models vertical patterns and then moves to horizontal and other patterns. The adult provides a guide for horizontal patterns (the edge of the table or carpet, a piece of tape) or for other patterns (a square, a series of circles). The child copies the order of the spatial series maintaining the direction and sequence. He recognizes patterns in his environment and creates new patterns. The child invents relationships of "between", "next to", "first", "above".

5. Opportunities to explore alternate routes to an endpoint. The adult provides materials and activities that highlight and provoke different paths to the same point. A roadway mat for toy cars would provide this type of experience. The child explores curves, corners, detours, and "wrong" directions as he constructs relationships between different paths and his destination.

D. Spatial Relations: Euclidean and Projective:

Providing experiences for children to invent relationships between points, lines, and regions when the properties of this space can be changed by compression, expansion, or re-orienting. Included would be concepts of absolute length, degree of angularity, amount of curvature, direction in a coordinate system, and projections/shadows.

1. Opportunities to explore the way objects fit together. The adult provides materials that can be joined or fitted together as well as materials that cannot. The fitting process identifies suitable materials: snap, screw, slide, fill, hook, push in and so on. The adult provides these materials as a practical and useful part of play and of routine activities rather than as isolated activities. The adult leaves materials "undone" i.e.. not screwed

together or zipped up, knowing that children strive for closure and will be attracted. Adults provide time for trial-and-error exploration but intervene with a suggestion before a child becomes frustrated. The child actively explores the fitting process. The child actively explores the spaces involved (e.g. the space of the peg and the space of the peg hole). The child constructs relationships about spaces that do and do not fit together.

2. Opportunities to rearrange and reshape materials. The adult provides materials that may be rearranged (e.g. furniture, blocks, Legos, play tiles) or reshaped (e.g. clay, pipe cleaners, body positions). The adult models new arrangements or shapes. The adult may contrive a "pause" in the action to inspire a different arrangement or shape. The child rearranges or reshapes materials. He constructs relationships of positions (on/off, in/out, top/bottom, first/last, beside, between), relationships of direction (up/down, around/through, to/from, sideways, across), and relationshps of proximity (near/far).

3. Opportunities to observe different viewpoints from different positions in space. The adult provides materials in out-of-the ordinary orientations. For example, pictures may be hung upside down or objects may be viewed through a glass of water. The adult provides activities in which the child is in an out-of-the-ordinary orientation. For example, riding on his back in a wagon or sitting under a table. The adult may combine the above two experiences so that a child lies on his back painting on a horizontal easel (use thick paint!). The child is exploring different spatial positions and constructing knowledge about the relationships between the way things look and the way things are positioned in space.

4. Opportunities to experience one's own body. The adult provides open-ended movement problems, such as exploring different ways to go down a slide. The adult provides materials and activities to highlight routine

and unusual uses of body parts. Painting with one's feet would be an example of this type of activity. The adult provides materials that can (or cannot) be joined or fitted together with the body or its parts. Trying to sit in different-sized boxes would develop and awareness of where a body fits/doesn't fit. The child explores his body's parts and constructs knowledge from how they relate to each other. The child explores the movements and positions of his body. The child explores the relationship between his body and the objects in his environment. The child may name body parts but that is not the intent of this experience.

5. Opportunities to actively explore shapes. The adult provides materials that highlight the properties (length, angularity, curvature) of regular and irregular shapes. The adult selects materials that have fixed, distinguishable shapes rather than materials conducive to change (e.g. a cookie cutter would be preferable to a piece of string). The child actively explores the properties of regular and irregular shapes. The child explores the relationship between the shapes and the environment they fit into. The child may name the shapes but that is not the intent of this experience.

E. Temporal Relations: Providing experiences for children to construct an understanding of time as a continuum. This understanding depends, in part, on being able to distinguish "time" from how fast, how much, in what order or with how much energy it was done.

1. Opportunities to explore different rates of speed. The adult provides materials and activities that will highlight various speeds. Rolling a ball or rolling one's body slow, then a little faster, then really fast, and then slow again would provide this type of experience. The child actively explores various speeds by moving his body or objects. The child is not expected to make a comparison of speeds or to distinguish speed from time, space, or energy.

2. Opportunities to experience a variety of marked time intervals. The adult provides a concrete signal (e.g. kitchen timer), real action/event (e.g. plug in the popcorn popper), or a representation of the signal, action, or event (e.g. calendar) to indicate the beginning and the end of a time interval. Common time intervals in an early childhood setting such as breakfast, group time, play time, story, winter, holidays or field trips naturally provide variety in their duration. The child is actively involved in activities from their beginning to their end. The child recognizes the markers used to designate the beginning and end of time intervals.

3. Opportunities to coordinate past, present, and future. The adult provides materials to represent past, current and future experiences. The representations may be verbal as when using questions such as "what will we need...?" or statements such as "Remember yesterday when we...?" The representations may be nonverbal in the form of calendars, chart stories, or photographs. The child recalls past events, recognizes how the present is similar/different and plans for the future. The child constructs relationships between his past, present, and furture experiences.

4. Opportunities to recognize cause-and-effect while participating in a sequenced event. The adult provides activities which can be broken down into a sequence and in which the cause clearly precedes the effect. An activity of this type would be making popcorn. The sequence basically goes (1) Measure the Ingredient (2) Plug in the popper to heat the ingredients (3) The popcorn heat causes the popcorn kernels to pop (the effect.). The child actively participates in the activity and becomes aware of the role of time in determining the order and result of events.

5. Opportunities to participate in a sequenced event not involving cause-and-effect. The adult provides activities which can be broken down into a sequence and in which the antecedent events do not necessarily

cause the subsequent events. An activity of this type would be making an art project of the follow-the-directions variety. The sequence basically goes (1) Draw or trace the parts (2) Cut out the parts (3) Glue the parts together (4) Decorate. "Drawing the parts" does not cause any of the remaining steps. The child participates in the activities and may become aware of how the steps are related in time.

6. Opportunities to reconstruct the temporal order of three to five parts of an event. The adult provides activities which can be broken down into a sequence of three to five steps and the adult provides a representation of each step in the sequence. Following-up an activity with an experience story (preferably on separate sentence strips) would be an example of this type of experience. The child actively participates in the actual experience and then represents the order in time of the three to five parts of the experience.

F. Number: Providing experiences for children to invent ordering relationships among objects and to invent class inclusion relationships among objects and to synthesize these relationships. Ordering relationships involve mentally assigning an order to objects so that, for example, each object will only be counted once. Class inclusion relationships involve assigning a quantity to a group of objects in the group of objects. "Eight" is not an inherent property of a given group but is the constructed relationship among the objects in the group.

1. Opportunities to compare sets of quantities. The adult provides discrete (countable parts) and continuous (measurable and pourable but not countable) materials which can be arranged into sets of differing quantities. The adult may provoke one-to-one correspondence between two sets by using materials that fit together such as pots and their lids. The adult uses language such as "more", "less", "the same", "just enough", "too many", "as many as". The child arranges

the materials into groups, exploring the resulting relationships.

2. Opportunities to add and remove objects from a set. The adult provides discrete (countable parts) and continuous (measurable but not countable) materials in sufficient quantity for forming sets of various amounts. The adult may set up pre-formed "sets" to specifically provoke the processes of adding and/or removing. For example she may put a half-filled bucket in the sandbox or a pile of six unit blocks on the floor in the block area. The child may begin his actions with this given set but then he will add to it or take away from it. The child will produce a change and become aware of how this affects the relationship of the group of objects.

3. Opportunities to explore reversability. The adult provides a set of materials. The materials may be discrete (countable) or continuous (measurable but not countable) but they must be structured or contained in some way so as to be identifiable as a distinct unit. Providing a string of ten beads would be an example. The child rearranges/reshapes/re-colors the given set. He may put the beads in a different order to make the straight string into a circle or he may paint the beads. He may return the string of beads to its original order or shape. In any case, as he explores these changes, he comes to learn that the quantity is not changed. He learns that the quantity of the new arrangement/shape/color is the same as that of the original.

4. Opportunities to explore equivalence. The adult provides two sets of materials of the same quantity (e.g. ten socks and ten shoes). When possible the adult selects materials that will provoke a one-to-one matching between the sets. Using ten socks and ten shoes would provoke the child to match one sock with each shoe. Using ten blocks and ten paintbrushes may not be as likely to provide a one-to-one matching. The child actively puts together

pairs and constructs a relationship of equivalence between the two sets. The adult, another child or a natural event may then intervene to break up the physical matching of the two sets. The child may physically reconstruct the pairs or he may mentally construct the equivalence of the sets.

5. Opportunities for experiences with the conventional number system. The adult provides materials and activities for counting (rote and rational), calendar, graphing, tally systems, and weights and measurement. In counting the adult emphasizes that each ojbect may be counted once and only once.

6. Opportunities to explore parts of a whole (fractions). The adult will provide materials which can be broken down from a whole into parts. The parts may be of equal or unequal value. Eating an orange for snack provides this type of experience. The child actively breaks down a whole into its parts and constructs a relationship between the whole and its parts.

II. Physical Knowledge: Providing experiences for children to discover the regularities of their environment. This knowledge is discovered through feedback from the objects in the environment and from actions on these objects.

A. Action Patterns: Providing experiences for children to discover the means of interacting with their environment in order to discover its properties. The action patterns may be transposed, generalized or differentiated from one situation to another. One type of action pattern would be pulling. Pulling may be reversed by pushing (transpose); its use may be transferred to a wide range of situations (generalize); and it may be modified to perform a particular function (differentiate).

1. Opportunities to explore body action patterns. The adult provides materials and activities for developing and practicing the "basic" action patterns which

include pouring, bending, cutting, pasting, pulling, floating, painting, climbing and stretching, as well as the reverse of each action. This type of experience involves the large muscles, small muscles, senses, and/or a combination thereof. The child is actively involved in discovering the action patterns.

2. Opportunities to further explore the uses of action patterns. The adult provides materials and activities that will provoke the use of a specific basic action pattern with different materials. The basic action pattern of cutting is generally first performed with paper. In this type of experience different types of materials to cut are provided (e.g. cloth, cardboard, yarn, tissue). The child will actively discover new applications of the basic action patterns. He will use one action pattern with several different materials.

3. Opportunities to explore the functional use of objects. The adult provides materials that have a known, familiar, intended, functional use. For example, paintbrushes are for holding in your hand and applying paint to paper, a stapler is for stapling pieces of paper together, a spoon is for eating, a bucket is for filling and so on. The adult avoids doing for children what they can do for themselves but provides a suggestion when frustration appears. The child actively discovers the intended, simple basic use of each object. He shifts his focus from what objects can do to what he can do with them.

4. Opportunities to integrate action patterns. The adult provides materials and activities which will encourage the combining and coordinating of actions. On a simple level this may involve squeezing and rolling clay. On a higher level, actions may be coordinated to accomplish a goal, or use a tool/piece of equipment: turning and pushing a screw while holding the screwdriver. The child is actively exploring which actions may be combined or

coordinated and how these combinations or coordinations may be applied to learning about his environment.

B. Properties: Providing opportunities for children to discover what objects can and cannot do as determined by the nature of those objects. Whether an object will float, melt, be found, roll, dissolve, etc., is determined not by a socially determined custom, or by the object relationship to another object but by the inherent properties of that object and physical phenomena.

1. Opportunities to explore the "permanence" of objects. The adult provides materials and activities that will provoke an awareness that objects continue to exist even if only part of it is visible or if it is not visible at all. These materials/activities are of two types: (a) recognizing part of an object for the whole object (e.g. the foot sticking out from under the blanket means a baby doll can be found there); and (b) recalling a missing or absent object (e.g. whose chair is missing from the table?). The child actively explore the existence of materials that are not fully visible or have been removed.

2. Opportunities to explore the "constancy" of objects. The adult provides materials in different contexts, different positions in space, different states, or highlighting different sensory clues. For example, play-dough may be kept in the Art Center but also appear in the House Center (different positions); it may be used at school and then sent home (different contexts); it may be allowed to dry out (different states), and/or it may be scented (olfactory cue as well as tactile). The child actively explores a given familiar material as it is discovered in different contexts, states, or positions and with different sensory cues. He discovers that the object remains itself irregardless.

3. Opportunities to actively explore objects in the environment with all of the senses. The adult provides materials that can be

safely touched, tasted, listened to, looked at or smelled. These materials highlight physical attributes (hardness, flexibility, color, shape, size, weight, texture, smell, taste, and sound) movement, position, and function (e.g. has holes in it, can put things in it, rolls). These materials include both inanimate and animate (people, animals) things. The child uses his senses to actively explore the physical attributes, movements, position, and function of the ojbects in his environment.

4. Opportunities to actively explore objects using a variety of action patterns. The adult provides materials that can be explored using different actions (e.g. blow, turn, pound, float, sift). Some of these materials will change as they are acted upon and some will not. For example, in making jello, a number of changes occur as the water and jello mix are acted upon: the water bubbles as it is boiled, the dry jello mix becomes a liquid when the water is added and stirred, the liquid is cooled when put in the refrigerator and later semi-solidified and maje jiggly. On the other hand, a ball may be bounced, thrown, rolled and kicked without it changing at all (hopefully). The child performs more than one action on any given object.

5. Opportunities to explore objects in relation to each other. The adult provides materials that can be combined or in some way be used together. Some of these materials will change as they are combined or used together but some will not. Mixing food coloring and water would be a "combining" activity and using paste with paper scraps would be an activity where materials are "used together". Included in this type of experience too would be exploring the effects of tools and equipment. The child discovers the properties of objects as he combines them or uses them together.

6. Opportunities to use objects for other than their obvious or intended purpose. The adult provides familiar objects but in a context necessitating a "novel" use. Generally, this is a matter of substitution: Sometimes the adult may substitute a different object for the usual one (e.g.

a feather for a paintbrush, a cup for a pitcher) and other times the adult will simply remove the usual object, thus requiring the child to supply the substituted object (e.g. removing the scoops from the sandbox - child substitutes spoons taken from the House Center). Exploring the "opposite" uses of objects is also a part of this experience. For example, usually paint is put on paper but for this experience, the paint is put on the table and the paper is used as a "paintbrush". Another example: a cup may receive or it may pour. The child discovers the properties of objects and is then able to use objects in non-routine ways.

PROCESS/STRUCTURE:

I. Problem Solving: Providing experiences for children to develop the fundamental thinking skills for resolving discrepancies in their environment. These skills are an outgrowth of the child's attempts to organize and to adapt to his environment through the processes of assimilation (integrating new information into existing mental structures) and accommodation (creating new mental structures or modifying existing structures to deal with new information). These skills include being able to identify alternative ideas/approaches, to reflect upon those alternatives and make decisions, to interpret the results of using those ideas/approaches, and to make judgments regarding those results.

Problem solving skills develop in a hierarchical or stair-step order with each level being an outgrowth of the preceding level. The levels described here are appropriate for children of pre-school and early elementary age. The levels of problem solving ability do not automatically transfer to all types of problems; it is possible for a child to be at Level 2 with teacher-constructed problems, for example, and to be at Level 6 when encountering routine problems. It is then, very important for children to have the opportunity to "transfer" their learning by being provided with different types of problems and with different examples of the same problem.

A. Levels of Problem Solving:

1. Ability to recognize cause-and-effect relationships/ Ability to anticipate outcomes.
This skill is actually a pre-requisite to problem-solving abilities. One of the major challenges to facilitating problem-solving abilities is in finding problems that are recognized by a child. Adults and children perceive situations differently; what may be a "problem" to an adult may not be to a child. The likelihood that a problem will be recognized as such is greatly increased if the child is able to (a) recognize cause-and-effect relationships and (b) anticipate

outcomes. The child must understand that two events are related and he must understand the nature (cause-effect) of that relationship, because it is the breakdown of that relationship that is the "problem". Routine, consistent care-giver behaviors and opportunities to explore the environment contribute to an understanding of cause-and-effect. Similarly, the child must have an expectation, a sense of what is supposed to happen, in order to be aware of problems. The child must be able to recognize that "this outcome is not the usual one, something is different here - a problem". This ability develops from a broad background of experiences which can be surfaced to relate to the current situation. Opportunities to explore the properties and function of objects through imitation and play contribute to the development of the ability to anticipate outcomes. A child may be considered to be at this level of ability if he demonstrates this type of behavior:

*waiting for the adult to unlock the typically-locked door

*flipping on the light switch if the room is dark

*turning off the faucets when the sink is full

*repeating an action which created an interesting effect, such as a noise or design

*removing an obstacle

2. Ability to perceive a problem/Ability to observe a discrepancy. Once a child is able to anticipate outcomes/recognize cause-effect relationships, it is then possible for him to recognize a change in the status quo. It is this change that is the "problem". The child expects one thing but what happens is something different. He is in a state of cognitive conflict. As mentioned above, what the child identifies or perceives as a "problem" is closely related to his previous experiences and may or may not match the adult's perception. Development of this ability may be facilitated by providing

novel/surprising objects or incongruous situations as defined by the child's backgound of experiences. If a child has had experiences with magnets and metal objects, an appropriate "problem" could involve mixing in non-metallic objects. The child expects the objects to stick and will be surprised that the new objects do not; he is ready to perceive this problem. If the child has not had prior experience with magnets he might not be surprised that some objects stick and others do not; he would be much less likely to observe the discrepancy and perceive the problem. The adult can further facilitate this learning by helping the child to focus on that aspect where the problem or discrepancy lies (in this example, the sticking ability). Modeling relevant exploratory behaviors is one way of focusing: explore the parts, look at it from different angles, contrast it with the familiar or expected, act curious, investigative, surprised. A child may be considered to be at this level of ability if he demonstrates this type of behavior:

*Looks surprised when something different happens

*Investigates new materials

*Communicates with adult when something different happens

*Appears to be alert to situation or conditions needing improvement

3. Ability to confront a problem and try at least one solution. Young children often will substitute a whole new object or situation rather than acknowledge at a conscious level that a problem exists and it has a solution. Facilitating development of this third level of ability begins with motivation to try to solve a problem. The adult must provide an accepting, non-threatening atmosphere. All ideas are reacted to in a positive manner. If a child appears hesitant, the adult may try to verbalize what the child may be thinking, e.g. "What made it do that?". The adult allows time for thinking. Once a child is motivated to confront problems, he must then

develop the ability to accurately and specifically identify the problem. He must observe, gather the information, ask questions (not necessarily verbal or of others), and get at the cause. The adult may facilitate this learning through the use of questions (e.g. What happened when the magnet touched the wood?) and modelling relevant behaviors (e.g. repeating the magnet-wood action several times, going back to a magnet-metal action, looking curious and investigative). The final component at this level is trying at least one solution; making at least one attempt to resolve the conflict. The attempt does not need to be successful (e.g. turning the piece of wood over to try to get the magnet to stick); it may only be marked by the child making some change in his approach or pattern of actions. A child may be considered to be at this level of ability if he demonstrates this type of behavior:

*Repeats the action associated with the "problem". Contrasts the "problem" action with a "non-problem" action. Makes a change in the action associated with the problem.

*Example: The child rips his pants. He pulls the fabric apart (repeating the problem action). He touches his other pant leg (contrasting with non-problem action). He holds the fabric edges of the tear together (change in action).

*Example: The child puts the paintbrush in the paint cup and it doesn't fit. He puts in it again (repeating the problem action). He sticks his finger in the opening (contrast, and possible solution). He gets a different paintbrush (change).

4. Ability to be aware of a number of different approaches and ideas to try in solving a problem. At this level there appears to be a stronger motivation to be successful in solving the problem because the individual

will generate a number of ideas as possible solutions. This requires that the child be able to think flexibly (to be able to shift one's approach), fluently (to be able to generate many ideas), originally (to be able to generate "different" or "far out" ideas) and elaborately (to be able to work out the details of the idea). This type of thinking can be stimulated initially in small group activities in which each person must generate an idea different from the others. It can also be stimulated with questions such as "How many ways can you think of...?", "What's another...?", "Can you think of a different...?"

A child may be considered to be at this level if he demonstrates this type of behavior:

*He tries a new approach in solving the problem. For example, the child has been trying to shove a piece into the wrong hole of a shape sorter. He now turns the box over and tries a different (right or wrong) hole.

*He tries many different ideas to solve the problem. For example, the child trying to put a piece into a shape sorter may (1) insert it into each hole; (2) vary the angle of the piece being inserted; (3) put the sorter on a different surface or (4) look at the sorter from a different angle.

*He tries very different, even "far-out" ideas to solve a problem. For example, the child places the shape on the floor and tries to place the sorter over it (in order to insert the piece).

*He works out the details of the approach. For example, he may tell the teacher what he needs and how he's going to go about fixing the wagon. Another example might be the different positions and angles a child tries in making a marble runway.

5. Ability to recognize the usefulness of objects, tools, or other people in solving problems. Recognizing the existence of resources outside of one's self that may be instrumental in solving a problem is the essence of this next level of problem solving skills. This skill is built not only on the preceding problem solving skills but also on the knowledge of properties of objects, specifically the routine and alternate functions of objects. Adults may facilitate this skill by modelling revelant behaviors. An example: A child is trying to fill a plastic butter tub with water. The problem is that the tub has been punched with holes and the water keeps leaking out. At the lower level, the child might try to stop the leaks with his hands, by pouring faster or by setting it down. At this level he covers the holes with pieces of masking tape. (Again, the solution does not need to be successful; the process is more important.) The child who may be considered to be at this level may demonstrate this type of behavior:

*He looks around for something to supplement or replace his efforts.

*He enlists the assistance of an adult in the solution that he has thought of.

*He uses the object or tool appropriately.

6. Ability to observe the effects of attempted solutions. It is not uncommon for children, particularly three-year olds, to basically ignore the results of their attempted solutions. Their subsequent actions are not apparently influenced by what has just happened. At this level, however, the child does watch for the changes effected by his actions, the outcomes of his manipulations. He gives consideration to his observations as he plans his next idea or approach. The results of the previous idea/approach are integrated into the next idea/approach. The adult may facilitate the learning of this skill by focusing attention on the changes/outcomes of an action. Questions such as "what happened?" would be appropriate. A child may be considered to be at this level if he demonstrates this type of behavior:

*Subsequent attempts are obviously related to prior attempts. For example a child is faced with an obstacle course. He tries to go over the object but can't quite get over. His second-and-related attempt involves getting a stool to stand on. (An unrelated attempt might be going around the object.)

*The child waits for an action to effect its change or produce an outcome before going on to the next idea.

*The child invites an adult or peer to share his observation.

*The child performs the action again.

7. Ability to evaluate solutions. At this level the child uses the information from his observations to make a judgment. He pulls together several pieces of information, compares this information, rearranges this information and may re-test some of this information. He interprets the results, draws conclusions and determines the criteria for making his judgment. Finally he makes a decision as to which idea/approach is the best. The adult can facilitate the learning of this skill by providing opportunities for practice in structured small group activities. In play, the adult can remind the child of the original problem and ask questions such as "Would that work?", "How would that help?", or "Is there a better way?". The child considered to be at this level may demonstrate this type of behavior:

*Express satisfaction or dissatisfaction with the solution.

*Tentatively explore several possiblities but fully pursue only one.

*After the initial experience, use one particular solution consistently.

*Verbalize his criteria for choosing a solution.

*Share the solution of choice with others.

8. Ability to transfer learning to similar problems. In its simplest form, this ability appears as the child makes a connection between a previous problem and the solution to the current problem. He generalizes the application of a successful problem-solving strategy to one or more similar problems. Initially this often involves a mastered routine or unit of action. Examples of this would be: "to find something that is lost, look for it," "to get something that's up high, stand on a chair", "to get rid of a spill, wipe it up". Later applications involve actions that are less frequent in occurrence and which require modifications and refinements of the original actions. Examples of this might be: "to make things go down from an elevated position, incline the surface", "to make things bigger, add more", "to make secondary-colored paint, mix primary-colored paints". In its highest form, this ability appears as the child applies the general process of problem solving to all new situations. The teacher's role in facilitating the development of this ability begins with opportunities: similar problems are presented over an extended period of time in different contexts and/or with different materials. Children may be allowed to discover these related problems on their own or the teacher may provide guided practice. It is very important that the teacher model this behavior as well. And finally, sometimes a simple "Remember when..." is all that's needed. The child considered to be at this level may demonstrate this type of behavior:

*Verbally compares a past and a present problem.

*Uses an object from a previously solved problem in an attempted solution for a current problem.

*Uses an action from a previously solved problem in an attempted solution for a current problem. This is most obvious with routine actions.

*Modifies or refines a routine action to make it applicable to the current problem.

B. Types of Problems:
There is not a hierarchy or sequence associated with these problems.

1. Teacher-constructed. These are problems deliberately set-up by the teacher.

For example: — the teacher removes the paintbrushes from the Art area.

problem: what will we use to paint with?

— the teacher blocks off the lower part of the doorway.

problem: how do we get in/out of the room?

It is important to keep in mind that what the adult perceives as a "problem" may not be perceived as such by the child. This type of problem is contrasted with "child-constructed".

2. Child-constructed. As children actively explore the objects in their environment, they must deal with the new information coming in and make adaptive responses to their environment. This is problem solving. As children play, they are constantly encountering "problems". The difference here is that the problems are not deliberately set-up by anyone. They are basically constructed by the child as he goes about his interactions. The problems are determined by the nature of the objects or the relationships between objects. The existence of a "child-constructed problem" is not always obvious but adults can watch for activities that are of particular interest to the child and for expressions of surprise or puzzlement. Child-constructed problems are very individualized but might include these examples:

-trying to put on a shoe

-figuring out how to make a balloon expand

-how to knock down the bowling pins

This type of problems is contrasted with "teacher-constructed".

3. Routine. These are problems that are identical to or similar to previous experiences. They are problems that happen repeatedly. They often arise in the context of the daily classroom schedule. For example the breakfast routine may bring these problems:

-spilled juice

-passing out items

-chairs for everyone

-the amount of milk needed for the cereal

This type of problem is contrasted with "novel".

4. Novel. These are problems that have not been experienced before or at least not very often. These problems are not very similar to previously experienced problems, either. The problems may be teacher-constructed or child-constructed. Examples might include:

-an escaped pet (the first time)

-an overflowing sink (the first time)

-an unfamiliar object (e.g. an electric broom)

This type of problem is contrasted with "routine".

5. A Visible problem may be defined as a change from the anticipated outcome or usual cause-effect relationship. When the child is able to witness the change, to see the initial and final states as well as the transformation process, the

problem is considered to be visible. This problem may simultaneously teacher- or child-constructed and/or novel or routine, and/or reversible. Examples of this type of problem might be:

- the child watches another child transfer blocks from a pile to make a bridge. The child's constructed problem is to build a similar bridge.

- the child sees the teacher remove the batteries from the flashlight and place them on her desk. The teacher constructed problem is to make the flashlight work.

- the child assists the teacher in emptying the sandbox using the pail. The problem: to fill the sandbox.

This type of problem is contrasted with "not visible".

6. Not Visible - When the child is not able to view the change that creates the problem, to see perhaps only the final state or the initial and final states but not transformation, the problem from the "visible" type of problem is complicated by the fact that children at a pre-operational stage of development may be physically present during the transformation but still not actually cognitively process the change; functionally they do not witness the transformation. To ascertain whether the child has understood the connecting process between the initial and final states, try using reversible problems which can be solved by returning to the initial state.

The examples provided here are situations where there is no doubt that the child has not seen the change occur:

- the child finds feathers in the paint jar (the teacher has replaced the paintbrushes before school)

- the child finds the soil of his plant dried out after the weekend.

- the child enters the block area and sees a bridge that someone has built and left behind.

7. Reversible. This type of problem can be solved by undoing exactly what was done, by reversing the change process. These problems may be teacher-or child-constructed, novel or routine, visible or not. Witnessing the change can be of help in solving this type of problem.

Examples:

- problem: not enough chairs at the snack table because they were taken to the House center for play.

  solution: bring the chairs back from the House center.

- problem: the flashlight does not work because the batteries are in backwards.

  solution: put the batteries back in the right way.

- problem: the sink overflows because the drain is blocked.

  solution: unplug the drain.

This type of problem is contrasted with "not reversible".

8. Not Reversible. The solution to this problem involves manipulating elements different from those involved in creating the problem. Witnessing the change would be of little value in finding a solution to this type of problem.

Some examples:

- problem: the stairway to the classroom is blocked because of freshly applied wax.

  solution: the blockage can't be removed because of the wax -- to reach the classroom, an alternate route must be taken.

- problem: the lemonade is too sweet.

  solution: the sugar can't be removed but to make the lemonade drinkable, more lemon juice can be added.

- problem: a child cuts off part of his hair.

  solution: the hair can't be reattached, but to achieve a presentable look, additional hair can be trimmed.

II. Representation: Providing experiences for children to develop the ability to recognize, reconstruct, reproduce and use something to stand for an object or event. Representations are organized into levels ordered by degree of complexity and abstractness: index, symbol and sign. The foundation for these representations is sensori-motor experiences with concrete, real materials and active participation in real events. There also appears to be a sequential and developmental order to the process of representation: (1) recognize (2) use (3) reproduce (4) reconstruct.

A. Sensori-motor/Pre-representation: Providing experiences for children to experiment with real objects and to actively participate in real events. These experiences will be more critical for some children than others.

1. Participating in actual experiences.

   The adult plans and provides a broad range of experiences that may provide a base for the development of representation. These would include "routine" experiences (e.g. eating, bathrooming) "field trips" (e.g. zoo, store) and "projects" (e.g. cooking, building). The child actively participates in the experience, e.g. stirs the dough, picks out an apple at the store, is responsible for his own toileting.

2. Using senses to explore real objects, including art/construction materials.

   The adult provides materials which provoke a safe, primarily sensory exploration. These materials include "familiar" objects (e.g. apples, water, paint), "forbidden" objects (e.g. egg beaters, hammers, tape) and "novel" objects (tubing, mylar). The child explores the real objects and gathers information from all of his senses.

3. Using objects/materials for their routine or intended purpose. The adult plans and provides experiences to ensure that each child knows the basic "how to" for common objects. This might include "holding scissors correctly", "applying paint to paper", "turning the handle on the egg beater", or "pedalling the tricycle". The child uses materials safely and with regard to their routine or intended purpose. (A child who bangs on the bowl with the egg beater has not learned its intended purpose.)

B. Index: Providing experiences for children to recognize/use/reproduce/reconstruct a referential cue to stand for the real object/experience. The referential cue is directly or casually related to the physical properties of the specific object/experience. There is a physical connection between the representation and the real object/experience. The cue may be a part of the object such as the wheel of a car or the head of a cow. The cue may reflect a stimulus property of the object such as the smell of the banana or the shape of the airplane. The cue may be the sound, mark or substance made by the object such as the ringing of the telephone, the footprints of another child, or the web of a spider. Objects and events must be experienced on a sensori-motor level before they can be recognized from a referential cue.

1. Comparing realistic model to real object.

   The adult provides real objects and realistic models of those objects. A realistic model has all of the essential attributes of the real object down to the details but is generally smaller, made of a different substance, and not functional. A toy car is a realistic model of a real car, a plastic egg is a realistic model of a real egg or a toy hammer is a realistic model of a real hammer. The child demonstrates his awareness of this relationship by matching the model to the real object.

2. Using realistic models of objects in play.

   The adult provides a model which has all of the essential attributes of the real object down to the details but which is smaller, made of a different substance and not functional. The child demonstrates his understanding of the model-real object relationship by incorporating the models into his play. For example, he hammers with the toy hammer in the Woodworking center, he "cracks" the plastic egg in the House center and he pushes/drives the toy car down roads on a floormat in the Block center.

3. Using realistic models with part(s) missing in play. The adult provides a model which has all of the essential attributes of the real object, down to the details, but which is smaller, made of a different substance, not functional, and has a part or parts missing. This might be a toy car with one or more wheels missing, a toy airplane with the propeller missing or a toy dog with its tail missing. The child demonstrates his understanding of the model-real object relationship by integrating the model into his play. For example the toy car is pushed/driven down "roads", the toy dog is fed, the airplane is flown.

4. Using art/construction materials to form creations with an obvious shape/form.

   The adult provides art/construction materials such as paint, paper, clay, blocks, toothpicks, paste, and yarn. The child demonstrates his understanding of the representational value of these materials by making something with an obvious shape/form. He is not simply manipulating the materials or exploring their properties. He is reproducing or reconstructing a representation but the simplicity of the creation reflects the "index" level of his ability. The result of his attempt has a shape/form that is obvious to an adult observer. This may be a ball of clay, a painted line, a tower of blocks, or a folded paper hat, for example.

5. Recognizing an object from a "sensory" cue.

   The adult provides experiences that require the child to identify an object primarily from a sensory cue. This type of activity might be handprints, shadows, tape recordings, feely boxes and so on. The child identifies his own or others handprint or shadow, he identifies the sound on the tape as a cow, he reaches in the feely box and identifies thefork.

6. Recognizing and using objects in different contexts. The adult provides familiar objects in out-of-the ordinary settings. For example, clay may be put in the House Center instead of the Art Center, snack may be eaten outside instead of at the table, or toy cars may be put in the Art Center instead of the Block Center. The child demonstrates his representational abilities by first recognizing the object in its new surroundings and later, integrating the object into his play in that out-of-the-ordinary setting. For example, the child uses the clay in the House Center to cook pancakes or he uses the toy cars to make designs in the clay in the Art Center.

C. Symbolic. Providing experiences for children to recognize/use/reproduce/reconstruct constructions to stand for the real object/experience. The constructions bear a physical resemblance to the object/experience but they exist separately. The constructions may be (a) 3-dimensional, such as clay models or toys used for dramatic play; (b) 2-dimensional, such as pictures or drawings; or (c) action-based, such as body movements or sounds.

3-D(1) Using an object dissimilar to the real object for play. The adult provides materials and experiences which will provoke the child to substitute an out-of-the-ordinary object for the usual object in a play situation. The substituted object does not need to be realistic; it does not need to resemble the usual object in any way except its potential function. For example, a unit block does not look like an iron but its smooth surface has the potential to be used as an iron. A chair does not look like a car but its seating surface can potentially function as a seat of a car. The child uses the out-of-the-ordinary object in his play in the same way as he would use the ordinary object. This reflects his understanding that the out-of-the ordinary object may be used to represent or stand for the ordinary object.

3-D(2) Creating a model of real object from art/construction materials.

The adult provides art/construction materials such as paint, paper, clay, blocks, yarn, and paste. The child demonstrates his understanding of the representational value of these materials by making a 3-dimensional creation which reflects the "symbolic" level of his ability. This model resembles the real object in a way that is obvious to the adult observer: an elongated rolled piece of clay is recognized as a snake, a circle of unit blocks is recognized as a fence, a piece of folded paper is recognized as an airplane.

3-D(3) Using created models in a play context.

The child makes a 3-dimensional model that resembles the real object in an obvious way. The adult highlights opportunities for the child to use this model in a play situation. For example, a mud pie can be used for a birthday party or a block fence can be used as part of a re-enacting a trip to the farm.

2-D(4) Creating tracings, drawings, and paintings to depict real objects or experiences.

The adult provides real objects and experiences and the art materials for making tracings, drawings, and paintings. The child demonstrates his understanding of representation by making a 2-dimensional creation which reflects the "symbolic" level of ability. This model resembles the real object in a way that is obvious to the adult observer.

2-D(5) Using created tracings, drawings, or paintings, in a play context.

The child makings a 2-dimensional model that resembles the real object in an obvious way. The adult highlights opportunities for the child to use this model in a play situation. For example, the painted picture of an apple can be cut out and sold at the "store" or the cut out tracing of a car can be driven along a block road.

Action (6) Pantomiming the use of an object using the real object.

The adult provides the materials and the opportunities for the child to act out what he would do with the materials. The child actually uses the real object but represents the action: he holds the hammer andpretends to pound, he holds the apple and pretends to eat it, he holds the paintbrush and pretends to paint.

Action (7) Directly imitating the actions of a person/object.

The adult provides the materials and the opportunities for the child to act out what he sees another person or an object doing. The child acts at the same time that the person or object is in action. The child is using his own body movements to represent the actions of the person or object. For example, the child "bounces" with the bouncing ball, he pounds clay like the person sitting next to him, or he "flies" with the airplane flying overhead.

Action (8) Pantomiming the use of an object without the actual object.

The adult provides the opportunities which will provoke the child to act out what he would do with an object in a given situation. The child does not use the real object. He uses his actions to represent the real object and its use. He pretends to hold a hammer and pound - but without a real hammer. He pretends to hold an apple and eat it - but there is no apple.

Action (9) Imitating a person/object when the referent is absent.

The adult provides the opportunities which will provoke the child to act out what he has seen a person or object do in the past. The person or object is no longer present. The child uses his own body movement to represent the actions of the person or object. He pretends to pour coffee (like father did this morning), he pretends to fly (like the plane he saw yesterday), he pretends to bounce (like the ball in gym last week).

Action (10) Using an action to show how something or someone moves.

The adult provides the opportunities which will provoke the child to use body movements to show how something or someone moves. The child may take big, slow steps to represent the walk of an elephant. The child may flap his arms to represent the wing movements of a bird. The child may do somersaults to represent the rolling of a ball across a floor.

Action (11) Using an action to show what something or someone does.

The adult provides opportunities which will provoke the child to use body movements to show what something or someone does. This is a slightly higher level of representation than simply representing the movements of something or someone. The child may pretend to cook to show what daddy does or pretend to wash the car to show what mama does. The child may tear a piece of paper to show what scissors do. The child may slowly stand from a crouched position to show what plants do (grow).

Action (12) Using an action to show how something or someone looks.

The adult provides opportunities which

will provoke the child to use body movements or positions to show the attributes of an object or the feelings of a person. The child may bend forward and clasp his hanging arms to show how an elephant's nose looks. The child may dance around to show how a "happy" person looks. The child may curl up into a ball to show how a snowball looks.

Action (13) Producing the sound associated with an object.

The adult provides the materials and the opportunities which will provoke the child to make the sound usually associated with an object or animal. The child may say "moo" while playing with a toy cow, say "beep-bee'" with a toy car, say "vroom-vroom" while riding a pretend motorcycle (tricycle).

Action (14) Producing a sound to pretend to be doing something.

The adult provides opportunities which will provoke the child to represent an action or role with a sound. The child who is pretending to wash dishes may say "shhh" when turning on the faucet. The child who is pretending to make popcorn may shake the pan and says "pop-pop-pop". The child who is pretending to eat may make chewing and/or swallowing noises.

Action (15) Using sounds to pretend to be an animate being.

The adult provides opportunities which will provoke the child to represent an animal or person by making the sound usually associated with it. The child who is pretending to be mother may hold the telephone and repeat some of the words and phrases he has heard Mother use. The child who is pretending to be the baby may cry "waaa". The child who is pretending to be a horse may say "neigh".

Action (16) Using a shortened version of an action or action sequence to stand for the real event.

The adult provides the materials and the opportunities which will provide the child to re-create or represent a real event. The child's cognitive level limits his recreation to only one or two actions that were part of the original event's sequence. For example the child may stir a spoon in the pan twice to "cook dinner" or put a pair of pants in and out of the washing machine to "do the laundry" or give a shot and take a temperature for "going to the doctor".

Action (17) Pretending to be someone else by doing and saying what the person does and says (dramatic play).

The adult provides the materials and the opportunities which will provoke the child to re-create a specific role in a real event. The child's cognitive level permits him to involve other children, extend the play for ten minutes or longer, and incorporate several of the significant aspects of the real event into the play episode. The actions and language of the real event are most evident in the recreation. For example, a child may decide to re-create a bus trip. Other children are brought into the play as passengers. The child/bus driver greets his passengers, sells them tickets, tells them to move back and/or sit down, and announces stops such as "Morrie St."

Action (18) Using inanimate objects as characters in play.

The adult provides the materials which will provoke the child to use them in their play to replace real people or animals. The child uses the doll to be "baby", the stuffed animal to be a "pet", the large cut-out figure to be the "doctor".

D. Sign. Providing experiences for children to recognize/use/reproduce/reconstruct arbitrary-, socially-determined configurations to stand for the real object/experience. These configurations bear no resemblance to the real object/experience and their usage is based on the attribution of socially shared meanings.

1. Demonstrating an awareness that oral language stands for objects/experiences.

   The adult provides oral language that is tied to the direct, concrete, current, personally meaningful activity of the child. The adult labels and describes the objects and actions of the child's individual experience. The child demonstrates an understanding that there are concrete referents for the word that he hears. That is, he knows that the adult's words "you're pouring the sand" match his action (pouring) and the object (sand).

2. Using oral language to stand for objects/experiences: receptive language.

   The adult uses oral language in her play instead of using the actual object/experience or any other representation of it. The adult provides an opportunity for the child to see and hear this type of representation behavior modelled. The adult may recall past experiences ("remember the bridge that we saw yesterday?") pretend ("pretend this is an iron"), create imaginary characters ("Hi pilot!"), talk about absent people ("Your mother called me on the phone"), and so on. The adult uses her oral language to evoke a mental image for the child. The child develops an understanding that a word or phrase is being used instead of the actual object/experience.

3. Using oral language to stand for objects/experiences: expressive language.

   The adult provides opportunities for the child to use oral language in his play in place of using the actual object/experience or an index or symbolic representation. The adult asks the child to recall past experiences, to pretend, to create imaginary characters, to talk about absent people, objects or places, to plan ahead. The child develops the ability to use his oral language to represent a person, object, activity, or experience.

4. Using language appropriate to a role in a play theme.

   The adult provides the experiences which are the foundation for this type of representation behavior, including field trips, stories, filmstrips and movies, puppet shows, and visitors. These experiences not only demonstrate various roles but more importantly, highlight the language that is associated with each role. The adult provides the opportunity to practice and "model" in a structured activity. The adult provides the time, space and props to evoke roles and the related language during play. In his dramatic play, the child uses the language he has heard associated with a particular person and what they do. For example, the child/doctor might say "Open your mouth", "Let me listen to your heart", "You need a shot", "Here's some medicine".

5. Understanding a variety of representation system.

   Other systems of representation might include graphs, codes, personal symbols (e.g. A=Tony, O=Terri), pictographs or picture writing, or music. The adult provides the materials and identifies their meanings. The adult provides opportunities for the child to practice this learned association. The child develops the ability to recognize the given sign(s) as standing for real objects/experiences.

6. Using a variety of representation systems.

   Other representation systems might include graphs, codes, personal symbols, pictographs, or music. The adult provides the materials for the child to create the representations. The child makes signs and uses them in his play to label objects, to "write" letters, to send messages, to give directions, to label possessions, to measure and so on.

7. Noticing that oral language can be written down and read back.

   The adult provides opportunities throughout the day for the child to describe something, for that description to be written down verbatim, and for the written description to be read back as it is written. The child might describe his artwork, a group or field trip experience (for a chart story), a plan (for play/work time), a recall (of his play/work time), a story (book), or a message (e.g. card or letter) to name a few possibilities. The child observes his words being written down and hears them being read back.

8. Recognizing written forms of oral language.

The adult provides consistent models of written language such as labels and signs for objects, places, and possessions; storybooks; or chart stories. The child recognizes the association between the written word and the object or place. The child recognizes the association between the written word that he sees and the oral language that he hears.

9. Writing down oral language.

The adult provides the materials: paper, pencils, model, tracing templates, movable letters. The adult provides the activities and experiences about which the child will be interested in writing. The child writes down what he says. The letters may resemble the standard English alphabet but not necessarily.

10. Reading back written forms of oral language.

The adult provides the materials and opportunities for writing down oral language - either by the child or the adult. The adult provides books: picture books, books of photographs, books made about field trips or other special experiences, books children have made. The adult provides herself as a listener and she provides private space for the "reading back" process. The child "reads" back the written forms of his or others oral language.

LANGUAGE

As a language learning program rather than a language remediation program, the emphasis is on utilizing the natural processes rather than creating artificial situations and methods. Language learning is considered to be an interactional process of representing with words what is already "known" cognitively. Intervention in this process should address:

- the interactional or constructive nature of the process
- the role of adult-child interaction
- the role of environment-child interaction
- the representation of existing knowledge
- the learning of different forms and functions as well as broad-based content
- the provision of a base for acquiring new knowledge and new language
- the role of cognitive readiness
- the evocation of existing knowledge

Implementation of the following strategies meets the criteria identified for intervention.

(1) Child-centered content

Language is not "taught" nor is language simply a matter of imitating what another says; children construct, discover, and generate their own language as they interact with their environment. Their language reflects their cognitive readiness and their cognitive holdings. Predetermined vocabulary and language content, form, and function arbitrarily selected by a teacher are not consistent with this view of the language learning process.

The language learning program for each child must begin with that child; an assessment to determine his communicative, cognitive, and social developmental levels is essential. The communication level will indicate what language already has been learned. A general index is provided by syntax development but it is the semantic and pragmatic features of the child's language that are most important in terms of intervention. All syntactic structures are learned within the context and content of talking about things in various ways. The child's cognitive understandings will indicate what can and will be talked about. The child's social development will indicate what types of interactions he is likely to engage in. It is possible then to select each child's language targets or objectives based on information pertinent to the child rather than randomly.

In practice at the model site, there are some additional considerations when selecting the content for language intervention. The first of these is the cognitive programs. The teachers have found that the most workable system is to select the cognitive "targets" first and then determine what language behaviors could be elicited by those cognitive activities. Teachers who utilize the organizational usefulness of the traditional "language unit" also consider the topic of the current unit when selecting individual semantic and pragmatic language targets. Because a group setting is used for language learning at the model site, the interests of all of the children, or at least preferred peers, are considered in addition to those individual interests of each child.

In reality, of course, teachers encourage any and all language. Selecting targets, that is determining the content of the language program, is essential for a planned, systematic, effective program.

ILLUSTRATION

Assessment

Communication Level: Stage III, DPHISC reference

Cognitive:
- understands object constancy
- beginning understanding of means-ends
- aware that others may be agents to act on objects
- nonspecific object play
- incomplete understanding of object permanence

Social:
- most of play is solitary with a few instances of parallel play
- doesn't initiate interactions
- doesn't ask for help
- indicates likes/dislikes

Interests:
- interested in objects that move with or without an agent

Current Classroom Context

Cognitive "objectives"
- "opportunities to explore objects in relation to each other"
- "opportunities to explore groupings of objects"

Language Unit: Transportation

Management Needs: medium

Intervention

Semantic:
- "opportunities to produce utterances that will encode objects that move"
- "opportunities to produce utterances that include semantic relations: agent, action, object"

Pragmatic:
- "opportunities to use verbalization to comment or to label"
- "opportunities to use language to manipulate object or person"

Syntax:
- Single word
- 10 transportation vocabulary words consistently

(2) The language learning program is integrated into the total curriculum and intervention is integrated into the total classroom/day. The cognitive and social components of the curriculum are essential for the implementation of the language program. These activities, as a major part of the total classroom context, play a highly significant role in determining the form, function, and content of each child's language learning. Language is not learned in just one isolated situation (e.g. labeling a picture or writing a chart story) but as it is used in problem solving, classifying, seriating, comparing time or space or number, discovering properties and action patterns, practicing self-help skills or interacting with peers and adults. In practice, this is simply a matter of coordinating and integrating the current classroom "unit" or "topic" with the current cognitive and social "objectives". Rather than arbitrarily selecting materials/activities for providing opportunities to seriate, for example, materials/activities related to the "units" are used, as well as open-ended materials. To illustrate, if the current "unit" is transportation and the cognitive "objective" is to order by size (seriation), materials would include graduated sizes of trucks, cars and airplanes rather than fruits or shoes (which would be used however with the Food or Clothing Units). Of course each child's individual language and problem-solving targets would also influence the selection and use of materials/activities. This approach emphasizes language as part of the total development of the child. It also is particularly appropriate for hearing impaired children because it provides an organizational framework. An additional advantage of this approach is that it provides an opportunity to integrate thinking skills across concepts. The result is broad based knowledge rather than isolated and specific facts.

As the activities for the cognitive and social components of the curriculum are integrated into the total classroom day, so is the language program. Learning language is learning to communicate and cannot, should not, be restricted to a specific time and place. Language learning in a structured setting at a specially designated time may yield the performance of the desired surface structures but the communicative usefulness of those behaviors beyond the classroom door is questionable. Children with hearing learn language throughout their day as part of their normal routine. This model offers the same opportunity to children with hearing losses. Using the total classroom day and setting creates more opportunities to use language and in particular, more opportunities for one-to-one adult-child language interactions. The more a child uses language, both verbal and non-verbal, the more he interacts with his environment and discovers how language works and which language works best. Using the total classroom day and setting also provides opportunities to use different forms and functions to communicate experiences and ideas.

The time and setting for language learning in this program then is primarily Self/Selection/Play, but also Routine activities and Group times. Play is particularly suited to language learning because it meets all of the "criteria" that intervention should address . Capitalizing on the value of "play" can be challenging but the final three strategies make it possible and mostly painless. These strategies will also be helpful in making the most of Routine activities (things done regularly almost everyday such as meals, bathrooming, transitions, hearing aids and so on). Group times are generally used for "thinking" activities, but these are also very good opportunities for language learning because they evoke existing knowledge and responses are often action-oriented. Group activites may be designed to elicit and practice particular language behaviors that need remediation or are not occurring even with prompting during Play if the activities are immediate, direct, active and somewhat self-initiated interactions with the environment.

The next two strategies reflect the similarity of the developmental processes underlying the development of cognition and the development of language. Further discussion of "interaction with the environment" and "representation " can be found in the description of the cognitive program.

(3) Interaction with the environment

The process of constructing and discovering language requires self-initiated, direct, immediate, active interaction with the environment. Language is not learned solely by looking at pictures or words or by listening to and copying what another says. There must be first-hand action with the concrete materials and real people. Each individual must do this for himself; it can't be handed or transmitted to him. As a child develops cognitively, it does become possible for him to learn through more "distant" interactions, i.e. removed in time and space from the real concrete experience. Representation, the next strategy to be discussed, is important to this distancing.

In intervention, interaction with the environment is essential because it evokes existing knowledge and permits encoding of actions. Children talk about what they know about. The teacher's challenge is to find out what the child knows about, to set up an opportunity for the child to demonstrate that knowledge, and to assist the child in describing his actions/expressing his thoughts. This requires careful planning of the classroom context and an alertness to opportunities. It requires that the teacher be active and highly interactive with the children. The description of the cognitive program and the next two strategies should be helpful.

(4) Representation

Representation refers to the process of making something (object, action, image, word, symbol) stand for something else (object, action, problem, situation, concept). The ability to use this process is founded in concrete experiences and develops to increasing levels of abstraction. Language is considered to be at the highest end of this continuum. While the capacity to represent cannot really be manipulated by outside events, it is important to provide the opportunities for its development. Concrete experiences involving first-hand manipulation of real objects is the starting point. The first step towards representative behavior is imitation. both motoric and verbal. The next level is symbolic play, characterized by pretending. At the next level, index referential cues directly or casually related to the physical properties of the specific object/experience are recognized and used. At the symbolic level, the representation may share a common property with the real object experience but they are distinct from one another and exist separately. At the highest level, sign, arbitrary, socially-determined configurations stand for the object/experience. Language, oral and written, are sign level behaviors.

In this language learning program, providing the opportunities to develop the representational behaviors prerequisite to language is a key strategy. The modification made for children with hearing impairments is that every representational behavior is considered an opportunity to elicit, generate, and/or practice language.

To illustrate:

Concrete experience:	baking cookies
Symbolic play:	pretending to "bake cookies" in the "House" with a toy oven and plastic "cookies"
Index level:	using plastic "cookies"
Symbolic level:	making "cookies" from construction paper and crayons
Sign level:	pasting the paper "cookie" on a sheet of paper and writing "We made cookies".

Each representation activity in fact provides an additional opportunity to talk about the original experience. Language is never learned in one presentation - these activities ensure that language will be presented many times.

(5) Adult - child language interaction

While the importance of interaction and representation in a total classroom environment cannot be undervalued in intervention, without interaction with other people there wouldn't be access to language nor would there be a reason to communicate. In this language learning program, the environment is set up to ensure a high rate of adult - child language interaction. The adults in these interactions systematically apply the following techniques adapted from the characterisitics of mother-child language interactions and the INREAL language model.

- The adult responds to all communication signals from the child - unintentional or intentional, verbal or nonverbal-by interacting.

- The adult talks about the inferred wishes, needs and intentions of the child. A high rate of interaction is necessary to more correctly identify these inferred wishes and intentions.

- The adult makes his/her language more accessible with a slightly slower pace, slightly exaggerated inflection, phonologically simplified words (e.g. papa for father), a reduced vocabulary set (e.g. dog rather than Pekinese) and reduced syntactical complexity (e.g. Open the door rather than Pull open the door with the handle).

- The adult's primary motivation is to be understood by the child and to understand him.

- The adult makes use of redundancy and repetition.

- Before communicating, the adult establishes joint attention, e.g. both parties are attending to the same thing. Joint attention can be established by referencing - a nonverbal, discrete, visible movement that directs the child's attention to the object or event.

- The adult follows the direction of the child's interest/topic. This means not having predetermined vocabulary or dialogue as in "Teacher's objective is to talk about the animals in the picture. The child points to the bicycle and says "Home". The teacher replies, "You have a bike at home? That's nice. What animal is this"?

- The adult talks about the "here and now", using the present tense, gesturing, describing ongoing actions and using proper nouns.

- The adult makes the child's language functional by consequating it with her attention and with the object/services requested by the child.

- The adult asks "open-ended" questions rather than questions with only one correct answer or with a "yes/no" answer.

- The adult "self-talks": talking about what she is doing/thinking as she is doing/thinking it at a level appropriate to the child's verbal skills (e.g. If a child is producing one word utterances, self talk should be one to two word utterances).

- The adult "tells and shows": talking first and then showing the object so the child won't be lost to the object before he has a chance to listen to the language.

- The adult models and encourages "turn taking" behaviors through games such as Peek-a-Boo or "Where's your _____?" and through "waiting and signaling" in which the adult waits with obvious anticipation (e.g. pauses, raises eyebrows and opens mouth slightly) while looking at the child with expectation for the child to take his turn.

- The adult elicits language not by asking questions such as "What color is it?" or "How many do you have?" but by helping the child describe what he has or what he is doing. Initially the adult may have to do all or most of the talking/describing with the child modelling the critical elements.

- The adult uses "parallel talk". The adults talks about the actions of the child as they are occurring during joint attention or action. The adult uses language appropriate to the child's level.

- The adult uses "labeling" by providing the word for a person, animal, or object in the environment without being asked (verbally or nonverbally).
- The adult uses "translating" by providing the language for something the the child has expressed nonlinguistically. For example, the child points to a car and the adult says "That's a car".
- The adult uses "imitating" by repeating exactly or in part what the child has just expressed. This is an excellent way to initiate communication with very young children. It can be used with older children to clarify, affirm, acknowledge, comment, or maintain a topic.
- The adult uses "modeling" by demonstrating a motor, vocal, or verbal behavior and requesting the child to repeat the same behavior.
- The adult uses "expanding" by producing an utterance that extends the preceding child utterance to a more grammatically complete one.
- The adult uses "semantic extending" by producing an utterance that adds new information to the preceding child utterance.
- The adult uses language to interact, not just for controlling. Controlling language behaviors include "labeling" and "requesting actions".
- The adult provides opportunities for "meaning equivalence" by developing other ways of expressing a concept (e.g. "John opened the door", "John pulled open the door", "The door was opened by John").
- The adult "mirrors" the child's gross and fine motor movements. This process involves the adult imitating the exact movements and facial expressions of the child. This strategy helps to develop a joint reference and the turn-taking process so essential for the communication process to occur. This strategy works well with the nonverbal child.
- The adult utilizes "restated vocal monitoring and reflecting". The adult listens to the child and says back correctly what the child has said in error. To illustrate, the child says "Sleep baby" and the teacher follows with "Yes, the baby is sleeping".

- The adult uses S.O.U.L. - Silence, Observation, Understanding, and Listening. This technique should be used before beginning a language interaction with a child. It gives the adult time to tune into a situation before talking with the child and allows the child time to respond to the situation. S.O.U.L. allows the the adult to establish a rapport and develop a relationship with the child.

OBJECTIVES

The developmental sequence on the following pages may be used as a reference in determining the content for each child's language program.

Readiness for Learning Language:

Prelinguistic Behaviors/Preliminary Skills

In planning language intervention, a child's readiness for language learning must be considered. Before acquiring language, a child must make certain cognitive discoveries about his world and he must develop some basic skills for learning. Some preschool children with hearing impairments do not demonstrate these behaviors and should be considered "not ready" to learn language. The implications in this situation are: (a) that adults should not be frustrated by the absence of verbal language nor should the child be pressured to produce language and (b) that specific opportunities should be provided for the development and/or learning of necessary behaviors/skills.

The primary language readiness behaviors are listed below. In some instances time and opportunities are all that is needed. In other cases, skills/behaviors may need to be "taught" in a structured one-to-one setting.

(1) Object permanence

Understanding that an object that has been removed from immediate perception still exists somewhere and can be made to recur. See "Physical Knowledge" for activities.

(2) Attention

To people and objects, specifically to the characteristics which determine meaning.

(3) Means-ends

Understanding that an object, person or action may be used to retrieve something that is need/wanted.

(4) Motor or gestural imitation

An understanding that a movement can be duplicated by another and a willingness to do so. This is often the most important pre-linguistic skill because it provides a way of entering into the child's world. Begin by imitating the child in parallel play, gradually introduce variations on his movements. Keep movements simple and visible.

(5) Intentional non-verbal communication

Behaviors such as tugging, pointing, or showing (among others) indicate that a child understands the nature and function of communication.

(6) Turn-taking behaviors

(7) Use of objects

A basic understanding that objects can be acted on differentially and that objects have different properties and functions. Also, and perhaps more importantly, focusing on what one can do with an object (rather that just on what the object can do).

(8) Vocal imitation

An understanding that a vocalization can be duplicated by another and a willingness to do so, includes imitation of prelinguistic motor acts (e.g. blowing, humming, clicking) as well as isolated and babbled phonemes.

(9) Participation in non-verbal experiences as "doer"

Active participation in real-life experiences as opposed to passive watching. The opportunities for active participation must be available.

(10) Ability to provide feedback to adults through acts such as smiling that stimulate continued communication

(11) Ability to participate in joint activity with an adult, at least through eye contact

A child must have some interaction with adults in order to learn language. The minimum interaction would be eye contact to establish reference to the same object when talking.

(12) Causality

Awareness that people or objects can be the source of an action, forms the basis for thinking in terms of "doer of the action" (i.e. agent), "action", and "receiver of the action (i.e. object). Important for imitation.

(13) Ability to represent one thing with another

At simplest level.

(14) Mastery play

(a) modeling the play patterns demonstrated by adults and incorporating these into other routines; and

(b) experimenting with various possible routines on a variety of objects.

STAGE I (approx. 0 - 8 months)

A. Surface Form/Syntax

_____imitate/produce prelinguistic motor acts (e.g. blowing, smacking, cooing, humming, sucking)

_____imitate given gross motor acts and/or gestures

_____imitate/produce word-like vocal expressions/ word approximations

_____imitate/produce intonation patterns: imperative, declarative

B. Function/Pragmatics

_____participate in a joint activity with an adult, at least through eye contact

_____provide feedback to adults through acts such as smiling which stimulate continued communication

_____respond to vocalizations from another by looking at and/or vocalizing in response

_____acknowledge others

C. Meaning/Semantics/Content

_____nonverbal differentiation of (a) agent and action and (b) action and object (agent= instigator of action, object= receiver or benefactor of action--usually nouns)

_____demonstrate intent to communicate

_____use intonation to carry meaning in comprehension and expression

_____use natural gesture language: play pat-a-cake, responds to "up", waves for "bye-bye", etc.

STAGE II (approximately 8 - 12 months)

A. Surface Form/Syntax

_____single-word utterance

_____produce first words: typically "dada", "mama", "bye-bye"

_____try to imitate new words

_____imitate/produce vocal play (babbling, changes in volume) _____imitate/produce prelinguistic gestures: (a) pointing; (b) showing; (c) giving; (d) refusal; (e) showing off; (f) pushing away

_____imitate/produce vocalization with gesture

_____participate in turn-taking and communicative games and routines: nonverbal, imitation, or phoneme

_____perform intentional acts

_____use gestures to carry sentence modality: imperative, interrogative, declarative, negative

_____tie vocalization to activity

B. Function/Pragmatics

_____use gestures to initiate interaction in order to obtain object, to obtain attention, to obtain services, to express greeting, to express surprise, to express frustration, to establish joint reference

_____use non-linguistic vocalizations to initiate interaction in order to obtain object, to obtain services, to obtain attention, to express greeting, to express surprise, to express frustration, to establish joint reference

_____use consistent sound to initiate interaction in order to obtain object, to obtain attention, to obtain services, to express greetings, to express surprise, to express frustration, to establish joint reference

_____attend to/respond to others who are directing speech at him/her

_____listen to the conversations of others

_____babble directly to other person and/or to own image in mirror

C. Meaning/Semantics/Content

_____produce gesture consistently on seeing object/person

_____attempt to associate referent with words heard

_____demonstrate understanding of words like "daddy", "mama", "bye-bye", "no"

STAGE III (approximately 12 - 18 months)

A. Surface Form/Syntax

_____produce language that is basically unintelligible

_____produce five to ten words consistently and appropriately

_____produce single-word utterances embedded in jargon (short sentence-like series of meaningless sounds)

_____produce prelexical forms (a - related to apparent referents, but isn't a real word; b - independent from motor act or ritual; c - independent from single intonation contour; d - independent from speech act context)

_____produce jargon with sentence-like intonation

_____produce single-word utterances: function words (e.g. there, no all gone)

names

nominals (words to label people, objects, animals, substances, pronouns and abstractions)

action words (including demanding, describing, noticing)

modifiers (attributes, states, location, possession)

personal-social (social expressions such as please and personal assertions, such as no, yes, want)

B. Function/Pragmatics

___use gestures and vocalizations to express rejection, comments routine or requests

___use vocalizations to request, command, interact, greet, protest, label or gain attention

___use single-word utterances to request action, call, protest, greet, label, request answers, practice, regulate, request object, request services, get information or as instrument (e.g. "I want _____")

___answer speech with actions and respond to actions with speech ___expect others to use speech to communicate with him/her

___look to adult for cues to aid in comprehension/production of speech

___initiate simple communication with other (not conversational turn-taking)

___take turns verbally and non-verbally

C. Meanings/Semantics/Content

___produce phonemes in association with event/object/word consistently (e.g. pu-pu with boat play in water)

___vocalize as part of a total activity/tie vocalization to action

___demonstrate differentiation of (a) agent and action and (b) action and object in play

___produce name of object while in its presence

___respond to simple questions with searching movements or appropriate gesture(s)

___demonstrate understanding of a few object names

___demonstrate understanding of a few simple commands

___demonstrate understanding of location and future

STAGE IV (approximately 19 - 24 months)

A. Surface Forms/Syntax

___produce single-word utterances in strings of inflected jargon

___produce successive single-word utterances (two single-word utterances produced in a temporal proximity, note fall in intonation and slight pause between: "juice, drink")

___use "no" or "not" to negate "sentence"

___express questions with rising intonation at end of utterance

___ask routine "wh-questions": What this/that? Where NP go(ing)? What NP do(ing)?

___produce verbs without tense or person markers

___produce 20-50 vocabulary words consistently (plus names and jargon)

___produce two-word utterances learned as single unit (e.g. "more milk")

___imitate two- to three-word utterances

___respond to questions with single-word utterances

___use beginner determiners: adjectives (big), possessive pronouns (my) demonstratives (this)

___repeat single word utterance with action (e.g. car-car-car)

B. Function/Pragmatics

___answer speech with speech (verbal dialogue)

___express simple social phrases

___use words (rather than gestures) to request objects, request services, request permission, gain information, indicate wants, indicate comprehension, comment on events, entertain

___use question form to elicit object names to be learned (what's that??)

___share objects in interaction

___use words to organize environment

___express feelings of pleasure, sensation, surprise/excitement, complaint/displeasure, and interest

___use "all-purpose request words"

___directly manipulate other person or object

___use eye contact to get attention

C. Meaning/Semantics/Content

___produce single-word utterances that are context dependent and concrete

___produce single-word utterances that include semantic relations: action, agent, (person responsible for action), object, possession, (baby) and location, (down)

___produce single-word utterances that (a) encode objects used or acted upon and (b) encode objects that move or change

___use pointing and gestures to express relational terms: nomination, existence, and semantic relations: possession (daddy)

___use one word for many meanings

___produce relational terms:

nomination	-	labelling the object
existence	-	pointing out objects (that, there, oh-oh)
recurrence	-	requesting or commenting on the recurrence of an activity or object (more)
cessation	-	commenting on the cessation of an activity (stop)
rejection	-	protesting an undesired action or commenting on a forbidden object (no)
nonexistence	-	commenting when something was expected but it's not there (no)
disappearance	-	commenting when object disappears from context (all above)

STAGE V (approximately 24 - 30 months)

A. Surface Form/Syntax

___produce language that is 70% intelligible

___produce two-word utterances

___produce beginning morphemes: present progressive - ing (no auxiliary)
plural endings
possessive endings
past tense of irregular verb

___produce beginning grammatical structures:

"no" or "not" to negate whole sentence
"Yes/no questions" marked by rising intonation - routine "wh-questions"
memorized contractions (don't, can't)

___produce beginning grammatical categories: possessive (substitutes one for another freely)

___produce quantitative adjectives (e.g. more, no more)

___modify Noun Phrase: More-NP
modifier-NP
VP-modifier-NP
quantity/number
quality/appearance
size

___produce articles

B. Function/Pragmatics

___use language for pretending

___use language to share information and gain information

___initiate conversations

___demonstrate rudimentary politeness conventions

___contribute new information on a topic

___direct other to perform action

___use language to express intentions

___answer questions

C. Meanings/Semantics/Content

___name familiar objects

___use single-word utterance to represent (symbolic)

___use single-word utterances to express semantic relations and relational terms (expressing relationships, e.g. agent, action, location, rejection, disappearance, etc.)

___verbalize immediate experience

___make reference to past events

___demonstrate understanding of simple questions and instructions accompanied by gestures

___label objects

___produce environmental sounds (animals, vehicles, etc.)

___express simple ideas

STAGE VI (approximately 30 - 36 months)

A. Surface Form/Syntax

___produce three-word utterances

___produce grammatical categories: modal - can, will, be
auxiliary - is/are/am + -ing or adjective
pronouns - me, mine, I, you, this, these, those, that

___produce grammatical structures: imperative
negatives - no, not, can't, don't
yes/no questions - marked by rising intonation
wh-questions: wh-word appears at beginning
auxiliary appears but not inverted e.g. (Where Bill is going?) vs. Where is Bill going?)

Infinitive complement - I want to _____

___produce morphological structures: plurals, regular past tense (-ed), over-generalized o.k.

___demonstrate embedding: inserting functional relation into grammatical relation (e.g., "no ball" into "hit ball" --- "hit no ball") ___demonstrate conjoining: merging two grammatical relations that share a common term with a reduction of the overlapping term (e.g., "Bobby hit" + "hit ball" --- "Bobby hitball")

B. Function/Pragmatics

___express feelings: pleasure, sensation, surprise/excitement, interest, displeasure/complaint

___produce common greetings/farewells

___use language to gain information (including, asking for, confirming, and requesting repetition)

___use language to express requests for objects, services, permission

___verbally share experiences with other children

C. Meaning/Semantics

___produce functional relations:

recurrence (more ball)
rejection (no milk)
denial (not daddy)
non-existence (no doggie)
existence demonstrative or nomination (It book)
(belt)

cessation (stop car)
action (read book)
location in combination with nominals & action word (sweater chair - sit chair)

___produce semantic relations:

agent-action (daddy hit)
action-object (throw ball)
possessive (e.g. Adam checker)
agent-object (mommy ball)
experience (I/me VP, I like)
negative-action (no wash)
negative-attribute (not red)
location of object (e.g. sweater chair)
location of action (e.g. go store)

___verbalize own actions

___answer "where" and "what...doing" questions

___express relations between objects and concepts

___describe use of common objects

___repeat nursery rhymes, finger plays or jingles

STAGE VII (approximately 36 - 42 months)

A. Surface Form/Syntax

___produce four-word utterances

___produce five-word utterances

___produce refinements in morphemes:
  - present progressive (-ing)
  - prepositions (in, on)
  - regular and irregular plural
  - past irregular (e.g. got, went, sat)
  - possessive ('s)
  - past regular (-d)
  - 3rd person regular (s ending on verbs)
  - 3rd person irregular (is, has, does)
  - contracted modals (won't, can't)

___produce grammatical categories:
  - copula (+ adjective or noun) (copula is "to be")
  - auxiliary (+ action or adjective)
  - pronouns - my, mine, I, me, you

___produce grammatical structures:
  - negation
  - yes/no questions
  - wh-questions (including how, when, why)
  - possessive (His, hers, theirs, ours, mine, yours)
  - interrogative
  - "and" conjunction
  - contractions (there's, it's)

B. Function/Pragmatics

___engage in conversational turn-taking

___use "who" and "what" questions for obtaining information

___produce conversation appropriate to the listener and situation

___use language to ask many questions about events and environment

___ask for definitions of words

___talk to self (make-believe play)

C. Meaning/Semantics/Content

___produce semantic relations: agent-action-patient
entity-state-attribute

___use verbs to match features of nouns to express chosen meaning (e.g. potatoes are peeled, not just potatoes are cut)

___demonstrate understanding of adverbs of location

___produce semantic relations: agent-action-object
agent-action-location
agent-object-location
agent-object-location

___produce past tense of verbs to mark changes of states, not to refer to past events (e.g. "broke" vs "ran")

___ask "what's that?"

___demonstrate understanding of concepts: in/on/under
big/little

___produce "experiencer" where action is not action-based (e.g. "hear horn", "I like jelly", "Adam see that")

___refer to temporal relationships, relating a sequence of ideas or events

___refer to casual relationships with "(be)cause"

___describe objects with multiple concepts (e.g. a cow gives milk, lives on a farm, eats grass)

___use description words that show quantity

STAGE VIII (approximately 42 - 49 months)

A. Surface Form/Syntax

___produce complex sentences consistently:

coordination (e.g. "and", if, so, but, infinitive, clauses) complementation (want, like)
relativization (John, who is my friend, lives on Maple Street)
subordination (when, if, then, before)

___use "got"

___demonstrate mastery of negatives

___demonstrate mastery of question forms (auxiliary follows "wh": Where is Bill going?)

___produce four-to six-word sentences

___use infinitive "to" (I want to eat)

___ask yes/no question with "do" at beginning

B. Function/Pragmatics

___use language to comment on feelings of others

___use language to express problems and to offer solutions

___participate in long, detailed conversations

___use language to express feelings

___use language to request objects, services, permission, information

___pair imaginative play with monologue or dialogue

___predict outcome of stories

___verbalize "opinions"

___protest inaccuracies

C. Meaning/Semantics/Content

Produce semantic relations: experiencer-process
possessor-berb-possession
ambient-action
agent-action-complement

___generalize information from one event to another

___answer questions with additional information

___seriate events in time

___compare events and concepts

___tell a story from pictures

THE SPEECH DEVELOPMENT PROGRAM

An Overview

The framework for a speech development program in keeping with the other components of the DPHISC model is described in Dr. Daniel Ling's Speech and the Hearing Impaired Child: Theory and Practice (A.G. Bell Association for the Deaf, 1976). This approach views speech as a developmental process which occurs in seven broad sequential states. The framework provides a systematic, consistent and rational means of evaluating, prescribing and facilitating the development of the subskills within those stages.* The goal of this approach is the ability to produce the required sound patterns automatically in communication. Brief, frequently repeated speech experiences throughout the day within the context of the classroom and of the home enable children to reach this goal. This approach to speech development is highly individualized not only in terms of evaluation and prescription but also in the teaching strategies which depend on the sensory-motor capabilities of each child.

At the DPHISC model site, this model for speech acquisition was readily integrated into the total curriculum and into the total day. Some of the strategies which facilitate this integration are next described.

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*Several organizational materials are available for recordkeeping and planning:

- phonetic evaluation form (1976 A.G. Bell).
- "Cumulative record of speech skill acquisition" (1978 A.G. Bell).
- "teacher/clinician's planbook and guide to the development of speech skills" (1978 A.G. Bell).

GENERAL STRATEGIES*

*Strategies for specific speech targets are generated by the teachers using a variety of resources, including each other, and recorded in the teacher/clinician's planbook and guide to the development of skills by Daniel Ling, Ph.D.

(1) Whenever possible, work each child's speech targets into his or her play. For example: The pouring of sand is conducive to sustained vowels. Playing with animals and vehicles is conducive to a variety of sounds. Hammering a nail is conducive to repetition. This is not always possible because the children are self-directed. One approach to this problem is through parallel play. Begin by joining the child already at play, imitating his actions but adding the speech target (after a minute or so) without directly doing anything with the child or even overtly paying attention to him/her. If one target doesn't work, try another. The child makes the choice of whether to do speech or not.

(2) An alternative to doing speech targets as part of play is to do them between play episodes - when the child has finished one thing but hasn't started the next.

(3) Distribute the practicing of speech targets. Rather than trying to do all six or seven targets at each encounter, do only one or two but have more encounters.

(4) Take advantage of the "wait time" that comes with routine activities such as bathrooming, eating, putting on hearing aids. For example, as each child finishes eating breakfast, practice one or two speech targets with him/her.

(5) Use easily visible reminders such as wall charts, tags pinned directly to each child, pocket notebook, chalkboard, etc.

(6) Convey an attitude of expectation, that doing speech targets is a natural part of the school day and all children are expected to participate at the chosen time.

(7) Convey an attitude of fun, that doing speech targets is fun and we all enjoy doing them.

(8) If possible, provide the opportunity to do speech targets with different people: special education aides, service girls or boys, another teacher, university students.

(9) Make sure the child knows what his target behavior is by demonstrating it for him (her) first.

(10) Younger children are sometimes more comfortable doing targets as a group.

(11) Relaxing

It has been the experience of our teachers that a child who is relaxed will produce better voice quality in his/her speech. Do one of these relaxation activities everyday, particularly before working on speech targets. Try them yourself too - they really are relaxing and refreshing.

* Lay on the floor and close your eyes. Play some quiet, relaxing music for three to five minutes.

* Lay on your stomach. Close your eyes. Try to hold your body very still.

* Pretend that you are a rag doll. Relax your body parts one at a time: head, shoulders, arms, hands, back, legs, feet.

* Sit on the floor. Rub your body parts one at a time: feet, legs, stomach, back, arms, hands, shoulders, head.

* Lay on your back on the floor. Take one body part at a time and (1) make it tight and hard and (2) shake it loose: feet, legs, bottom, stomach, hands, arms, neck, face.

* Lay on your back on the floor. Bend your knees up. Slowly turn your head from one side to the other.

- * Get on your hands and knees. Lower your head and stretch your back up like a cat. Raise your head and lower your back down. Do it again.
- * Sit on the floor with your legs crossed. Roll your shoulders around - forward and backward. Roll your head around - first one way, stop, and then the other way.
- * Stand up. Do these motions very slowly: rocking, swaying, reaching for the sky.

(12) Blowing

___Put a candle (try different sizes) in a holder. Light it. Blow!

___Put something light-weight on your hand (cotton ball, piece of tissue, little feather) Blow it off!

___Get the straws and a cup or basin of water. Blow!

___Get out the horns from New Year's Eve. Blow!

___Get out the straws and some light-weight objects (cotton, ping pong balls, paper, pencil, small box, feather, styrofoam piece).
Get down on the floor. Put a light-weight object on the floor. Blow it across the floor. If you get good at it, try blowing through the straw to move the objects.

___Buy a windmill at the store (about 49¢). Blow hard!

(13) Sustained

___Fill a cup with salt, sugar, or sand. Hold the sound while you pour.

___Put a star or other sticker on a piece of paper. Give the child a crayon or pencil. Hold the sound while you draw a line to the star.

___Put a button on a piece of yarn. Tie a knot at both ends. Hold the sound while you push the button down to the end.

___Hold the child's hand and walk across the room (or farther). Hold the sound while you talk.

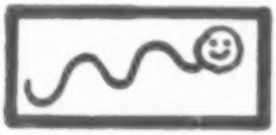
___Make a "road" for a toy car.
Hold the sound while you drive the car down the road.

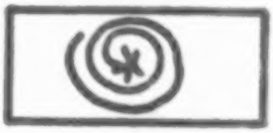
___Get out the tape measurer (the spool-kind)
Hold the sound while you pull out the tape.
Let go!

___Starting at the shoulder, make a smooth line down to the fingers.

___Walk towards the child as long as s/he holds the sound.

___Make little gameboards for the child to move his finger along while holding the sound:





___Make lines on the floors and/or walls with gym tape. Hold the sound while the line is traced with a finger, car, animal, block.

___Turn off the lights (or get in a box) and turn on the flashlight. Hold the sound while the flashlight is on and sweeping around the room (or box).

___Draw a face on a box. Thread a piece of string through the mouth and knot both ends. Pull the string inside of the box to begin. Hold the sound while the string is pulled out of the mouth.

___Thread several pieces of yarn through holes in the lid of a coffee can. Knot both ends. Pull the yarn inside the can. (The can be decorated so the yarn becomes "hair".) Hold the sound while each piece of yarn is pulled out.

___Wind up a wind-up toy. Let it go.
Hold the sound as long as the toy moves.

(14) Repeated

___Line up some empty pop cans or paper cups.
Make the sound when you knock over the can.

___Make some popcorn. Make the sound when the kernels pop.

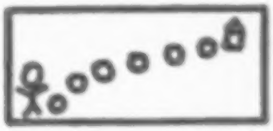
___Turn on the music.
Make the sound with the beat of the music.

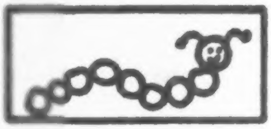
___Use two hands to pat your thighs. Make the sound when you pat.

___Jump. Repeat the sound when you jump.

___Starting at the shoulder, touch arm 12 times down to fingers. Repeat the sound with each touch.

___Make little gameboards. Child makes sound each time s/he touches a dot.





___Pound or pat something: a ball of clay with your hand, a pile of sand with a spoon, a peg with a hammer, paint and paper, a stick with a drum. Repeat the sound with each pound or pat.

___Walk up (down) the stairs.
Repeat the sound on each stair.

___Tape lily pads on the floor.
Repeat the sound as the child jumps from pad to pad.

___Put sticker dots all down the child's arm or leg. Repeat the sound as each dot is touched.

___Tape spots along a wall.
Repeat the sound as each spot is touched.

(15) Alternated

___One hand is the first sound and the other hand is the second sound. Go back and forth.

___Use two puppets. One puppet makes the first sound, the other puppet makes the second sound. Go back and forth.

___Use a toy person/super hero and two containers (boxes, cans, etc.) When the person lands on one container, he makes the first sound and on the other container he makes the second sound. Jump back and forth.

___Put two squares on the floor with masking tape. The squares should be pretty close to each other. The child jumps back and forth between the squares making the first sound on the first square and the second sound on the second square.

___Use two toy drums (decorated coffee cans or oatmeal boxes work fine.) Make the first sound as the first drum is hit and the second sound as the other drum is hit.

___Hop on one foot and then the other. Change sounds as you change feet.

___Sit cross-legged. Make the first sound as one knee is hit and the second sound as the second knee is hit.

___Make gameboards. For example: a frog (cut-out) and two lily pads, a bee (cut-out) and two flowers, one boy (cut-out) and two ice cream cones, a squirrel (cut-out) and two trees. The figure makes the alternate sound as it goes from one space to the other.

(16) Pitch

___Squat down and make a low sound.
Reach up high and make a high sound.

___Turn off the lights. Shine the flashlight on the ceiling. Make a high sound. Shine the flashlight on the floor. Make a low sound.

___Walk up the stairs and make a high sound.
Walk down the stairs and make a low sound.

___Make a ramp or incline for the car.
Go up the ramp, make a high sound.
Go down the ramp, make a low sound.

___Dance with a scarf. When the scarf is up, make a high sound. When the scarf is down, make a low sound.

___Play the piano or xylophone

___Hold your hand below your waist to indicate "low". Hold your hand above your head to indicate "high".

___Use puppets - use different pitch voices.

___Use Goldilocks & the 3 Bears book. Use different voice pitches for bears.

___Fill glasses with water at different levels. Hit with spoon to make different pitches.

(17) Intensity

Loud Voices

___Go outside where there's lots of room to move around. Be loud! Yell!

___Get ready for some noise. Get together some things that will make loud noises, like wooden spoons and pans or two pan lids together.

___Make loud "music" and sing loud.

___Pretend that you are sleeping. Only wake up when you hear a loud voice. Say it loud: Wake up!

___Do jumping-jacks. Count LOUD as you do them.

___Turn on a loud machine (vacuum or hair dryer, etc.) Talk louder than machine.

Whispers

___Repeat a sound in a whisper while you sneak up on a teddy bear.

___Read a story in a whisper.

___Sing la-la-la in a whisper to the baby doll going to sleep.

___Walk up the stairs to bed. Count in a whisper the number of stairs.

___Pretend to tell a secret to someone.

___Put a piece of candy under one of three cups. Child uses quiet voice to tell where candy is.

OBJECTIVES

Produce Vocalizations.

1. Imitate gross motor movements with ________ efficiency.
2. Spontaneously produce a phoneme within a six-hour period.
3. Spontaneously produce three distinct phonemes within a 60 minute period.
4. Spontaneously produce 12 vocalizations within a 60 minute period.
5. Imitate ______ tongue positions with _____ efficiency.
6. Vocalize on demand with _______ efficiency.
7. Vocalize on demand with _______ efficiency.

Demonstrate gross control of duration.

1. Imitate prolonged vowel sound(s) with ______ efficiency.
2. Imitate quick vowel sound(s) with _______ efficiency.
3. Imitate duration patterns (2 part) with ______ efficiency.
4. Imitate duration patterns (3 part) with ______ efficiency.
5. Imitate duration patterns (4 part) with ______ efficiency.

Demonstrate gross control of intensity.

1. Produce a loud voice with ________ efficiency.
2. Produce quiet voice with ________ efficiency.
3. Produce whisper with _________ efficiency.
4. Produce varied intensity patterns with ________ efficiency.

Demonstrate gross control of pitch.

1. Produce low pitch with __________ efficiency.
2. Produce high pitch with _________ efficiency.
3. Produce mid-range pitch with ________ efficiency.
4. Produce a discrete pitch change with ________ efficiency.
5. Produce a continuous pitch change with ________ efficiency.

Produce long vowels and diphthongs.

1. Sustain (3 seconds) long vowels and diphthongs with a minimum of 75% of efficiency over a one-week period.
2. Repeat (12/3 seconds) long vowels and diphthongs with a minimum of 75% efficiency over a one-week period.

3. Alternate (12/3 seconds) long vowels and diphthongs with a minimum of 75% efficiency over a one-week period.

Produce Step 1 consonants.

1. Produce Step 1 consonants in single syllables with a minimum efficiency of 75% over a one-week period.
2. Repeat (12/3 seconds) Step 1 consonants with a minimum efficiency of 75% over a one-week period.
3. Alternate (12/3 seconds) Step 1 consonants with a minimum efficiency of 75% over a one-week period.

Produce short vowels.

1. Produce short vowels in single syllables with a minimum of 75% efficiency over a one-week period.
2. Repeat (12/3 seconds) short vowels with a minimum of 75% efficiency over a one-week period.
3. Alternate (12/3 seconds) short vowels with a minimum of 75% efficiency over a one-week period.
4. Sing short vowels with varied pitch changes with a minimum of 75% efficiency over a one-week period.

Produce Step 2 consonants.

1. Produce Step 2 consonants in single syllables with a minimum of 75% efficiency over a one-week period.
2. Repeat (12/3 seconds) Step 2 consonants with a minimum of 75% efficiency over a one-week period.
3. Alternate (12/3 seconds Step 2 consonants with a minimum of 75% efficiency over a one-week period.
4. Sing Step 2 consonants with varied pitch with a minimum of 75% efficiency over a one-week period.

THE AUDITORY DEVELOPMENT PROGRAM

An Overview

From the training and experience of the teachers at the DPHISC model site has evolved a program for auditory development that can be integrated into the total curriculum and into the total day. While it is not within the scope of this manual to describe this program in detail, an overview is warranted to highlight the place of auditory development in the overall scheme. The book Auditory Training by Norman P. Erber (A.G. Bell Association for the Deaf, 1982) provides a more extensive description of a similar program and is highly recommended.

The major goal of the auditory development program is for children to maximize their ability to use their hearing for speech perception. Performance objectives have been developed which provide a framework for evaluation and instruction. The sequence of these objectives has not been substantiated as being developmental by research but has been suggested by experience. The primary types of auditory responses included in the framework are: (a) awareness and attention; (b) discrimination; (c) identification; (d) localization; and (e) memory and sequencing. Auditory "awareness and attention" responses involve checking hearing aids, orienting to listening tasks, learning response procedures, determining the presence (or absence) of sound, and attending to sounds. Auditory "discrimination" responses involve distinguishing sounds from one another, labelling sounds as same or different and developing categories of sounds. Auditory "identification" responses involve repeating, pointing to, or naming sounds heard. Auditory "localization" responses involve recognizing sound sources, discriminating directionality and using auditory skills at increasing distances from the sound source. Auditory "memory and sequencing" responses involve short-term recall of an increasing number of sounds and with increasing correctness of order. A listing of the performance objectives follows this overview.

The primary instructional approach for these auditory responses is best described as "adaptive communication" Erber, p. 43). Each communicative event throughout the day is an informal auditory evaluation, the results of which the teacher analyzes on-the-spot and then uses to adapt her next task/stimulus (i.e. what she will say) and the child's response to fit what she has just learned about the child's auditory functioning. The adaptation may take the form of repetition, a change in emphasis, clarification of speech, reduction of choices, reduction of noise, modified vocabulary or language structure, or addition of contextual cues. The goal is to provide an opportunity for practice at the child's current highest level of ability.

The instructional approach is utilized in three types of learning formats: (a) spontaneous conversational; (b) experience chart-story; and (c) skill exercises and games. The first format, spontaneous conversational, is used throughout the day especially during self-selection and routine activities. The teacher uses natural language structures and content related to an ongoing activity as auditory stimuli in the context of conversational interaction. The second format, experience chart-story, is used during a large or small group time. A planned or spontaneous shared experience is the basis for a chart-story composed of sentences and related pictures. The content and structures of this story become the stimuli in a semi-structured, closed-set listening activity. The third format, skill exercises and games, is used with small homogeneous groups, with individuals, or as a Listening Center activity. These activities are carefully planned and directed to provide practice with specific auditory stimuli and responses. The variety of learning formats allows for a balance of child-direction and teacher-direction, a balance of individualization and socialization, and a balance of communication and drill.

This approach to auditory development is very much in keeping with the philosophy and practices of the other components of the model. As with the other components, it does require that the teacher gradually construct a program that matches her current level of understanding and the current needs of her students.

OBJECTIVES

Demonstrate auditory awareness and attention skill.

1. Demonstrate appropriate learned response to presence/absence of music/noisemakers with _______ efficiency.
2. Demonstrate appropriate learned response to presence/absence of animal and environmental sounds with ___________ efficiency.
3. Demonstrate appropriate learned response to own name with __________ efficiency.
4. Demonstrate appropriate learned response to single command with ___________ efficiency.
5. Demonstrate appropriate learned response to loud and quiet sounds with ___________ efficiency.
6. Demonstrate appropriate learned response to long and and short sounds with ___________ efficiency.
7. Identify objects which make sounds with ________ efficiency.
8. Respond to sounds/speech from any given direction with ________ efficiency.

Demonstrate auditory discrimination skills.

1. Discriminate two noisemakers with __________ efficiency (min. of five combinations).
2. Discriminate loud and quiet sounds/speech with ____________ efficiency.
3. Discriminate fast and slow sounds/speech with ____________ efficiency.
4. Discriminate long and short sounds/speech with ____________ efficiency.
5. Discriminate three noisemakers with __________ efficiency.
6. Discriminate two animal sounds with _________ efficiency (min. of five combinations).
7. Discriminate own name from other speech with ___________ efficiency.
8. Discriminate five or more environmental sounds with ________________ efficiency.
9. Discriminate songs that are different in tune and lyrics with ______________ efficiency.
10. Discriminate rhythmic patterns with ________ efficiency.
11. Discriminate simple one part directions with ____________ efficiency.
12. Discriminate three animal sounds with _______ efficiency.

13. Discriminate class names with _________ efficiency.

14. Discriminate familiar words in a sentence with __________ efficiency.

15. Discriminate two songs with the same melody but different lyrics with __________ efficiency.

16. Discriminate sentences about familiar classroom activities with __________ efficiency.

17. Discriminate five noisemakers with ________ efficiency.

18. Discriminate five animal sounds with ________ efficiency.

19. Discriminate at least two word changes in a song with __________ efficiency.

20. Discriminate sentences differing in key word with ___________ efficiency.

21. Discriminate familiar words on basis of syllable length with __________ efficiency.

22. Discriminate familiar words on basis of vowel differences with _________ efficiency.

23. Discriminate familiar words on basis of consonant differences with __________ efficiency.

24. Discriminate initial consonant sounds in words with ______________ efficiency.

Demonstrate auditory identification skills.

1. Identify five familiar noisemakers with ________ efficiency.
2. Identify sounds/speech as loud or quiet with ___________ efficiency.
3. Identify sounds/speech as fast or slow with __________ efficiency.
4. Identify sounds/speech as being long or short in duration with ____________ efficiency.
5. Identify five animal sounds with _______ efficiency.
6. Identify own name with __________ efficiency.
7. Identify five environmental sounds with ______ efficiency.
8. Identify three different simple songs with ________ efficiency.
9. Identify five rhythmic patterns with ________ efficiency.
10. Identify a simple one-part direction with _______ efficiency.
11. Identify two songs with the same melody but different lyrics with _______________ efficiency.

12. Identify ten familiar words with ________ efficiency.

13. Identify two verses in a song with __________ efficiency.

14. Identify five words differing by vowel only with ___________ efficiency.

15. Identify five words differing by consonant only with _____________ efficiency.

16. Identify the initial consonant sound of 15 words with _____________ efficiency.

17. Identify the key (i.e. recurring word in three sentences with ___________ efficiency.

Demonstrate Auditory Localization Skills.

1. Attempt to localize sound with __________ efficiency.

2. Locate sounds/speech originating in front or in back with ___________ efficiency.

3. Locate sounds/speech originating on either side with _____________ efficiency.

4. Locate sound source within room with _________ efficiency.

5. Respond to own name from any direction with _______ efficiency

6. Respond to sounds/speech from any given direction with __________ efficiency.

7. Respond to own name from increasing distances in all directions with __________ efficiency.

8. Respond to sounds/speech from increasing distances in all directions with __________ efficiency.

9. Respond to short familiar commands from all directions with ____________ efficiency.

Demonstrate Auditory Memory and Sequencing Skills.

1. Choose in correct sequence two pictures/objects named or sounds heard from choice of four with _______ efficiency.

2. Choose in correct sequence three pictures/objects named or sounds heard from choice of six with _______ efficiency.

3. Repeat random numbers or colors with _______ efficiency. (3-4)

4. Repeat random numbers or colors with _______ efficiency. (5-6)

5. Repeat number of taps with ___________ efficiency.

6. Choose in correct sequence four pictures named or sounds heard from choice of eight.

7. Choose in correct sequence five pictures named or sounds heard from choice of nine.

THE SOCIAL LEARNING PROGRAM

Children with hearing impairments have traditionally exhibited some if not many unacceptable behaviors in school and in public. These behaviors are largely a result of not having been taught and/or having the time to practice skills related to social development. Teachers and parents alike have emphasized language teaching, remediation, and vocabulary building on an individual basis to the exclusion of social skill development. Children were given very limited times to interact with hearing impaired peers in the classroom and little if any time at home to interact with hearing peers because of the parents need to shelter their "handicapped child". Consequently, this inappropriate behavior in school and/or in public occurred causing the average lay individual with limited knowledge of hearing impairments to believe that these children and adults were mentally impaired as well.

The INREAL model states "we learn to communicate through communication". This communication takes place not in isolation by naming objects and pictures, but in a social context by talking with others. In order for true language learning to take place it must be generalized. Language learning in isolation is not. This isolated learning we have traditionally taught children with hearing impairments would be like a hearing individual going to Spain and using their textbook-taught language in that country. Thus, social skill development needs to be and is an integral part of the DPHISC curriculum for young children with hearing impairments. We as teachers and parents must no longer "talk" outside of the confines of the classroom and in public for these children. Hearing impaired children need to interact with both hearing impaired and hearing peers for this necessary social development to occur. When hearing impaired children are provided with a social skill thrust, they can and will be socially accepted.

This curriculum area reflects the social needs of young hearing impaired children through a guided learning process that allows the students to learn both social and language skills through frequent and ongoing interactions with others. Individual objectives are chosen for each child based upon both formal and informal assessments of the child's strengths and weaknesses. The categories of assessment include:

1. Play Behavior
2. Social Awareness Skills
3. Independence/Self Help Skills

Individual developmental patterns and learning styles dictate the type of approach utilized by the teacher for intervention. There are really no set guidelines or sequences to follow when choosing objectives for a particular child. The teacher develops an individualized social curriculum for each student in his/her classroom utilizing careful and critical observations of the child and a basic knowledge of normal developmental sequences. The students are observed by the teacher in various situations throughout the course of the school day. The observations include:

1. Play time or the Self Selection Period
2. Planning Time
3. Small group time
4. Large group time
5. Interacting individually with adults
6. Dressing to go home
7. Attending to tasks during play and individually

Objectives are chosen by the teacher from the categories of play behavior, social awareness and independence based upon the observation information. It may be helpful to make short notes in a notebook. One objective is chosen for a two-to three-week period. This objective best meets the need of the child at the time. A hierarchy of objectives from most to least important can then be developed for each child. These can be added to or modified as the need occurs. The teacher then sets up situations by putting out appropriate materials to facilitate independence and takes advantage of learning situations as they arise during the course of the school day. Incidental teaching or taking advantage of the "teachable moment" is one of the key factors for the development of social skills in young children utilizing the DPHISC model.

Social Strategies

Listed below are some strategies used by the teachers implementing the DPHISC model. These strategies have been found to be helpful for use with individual children and groups of children. Some relate to direct child management and some to environmental management of children. Together they provide the means for creating a workable, harmonious (most of the time), social system that accommodates individual differences and encourages interactions among children and adults.

- Model play behavior
- Model appropriate social behavior-greetings, manners, apologizing, etc.
- Take advantage of situations as they arise in the classroom - the "teachable moment"
- Acknowledge children's feelings
- Model "turn taking" behavior
- Encourage child involvement in solving problems as situations arise in the room
- Provide enough stimulating materials/activities for the size of your group
- Make group activities fun and action oriented but be realistic in terms of expecting children to get along
- Provide enough stimulating materials/activities for the size of your group
- Make group activities fun and action oriented but be realistic in terms of expecting children to get along
- Praise and encourage rather than dwell on the negative
- Give explicit, personal praise - "I like the way you put that truck on the shelf" rather than "Good boy/girl"
- Provides lots of practice and ample time for dressing and other self-help skills

___Model appropriate eating skills. Take part in meals regularly.

___Provide practice for survival skills in different ways and at different times throughout the day - picture form posted on wall, sticker on house if child tells address when asked, mail a letter home if child can tell address and city name, etc.

___Post classroom rules. The picture form works well. One to four rules for preschoolers is best.

___Be consistent when discipline problems arise. The "time out" chair has worked well when used appropriately as an alternative "quiet" activity to reduce tension.

___Give children choices, but only when you want them to have a choice.

___Establish a strong routine. Both children and adults need to know what to expect. The schedule board is helpful. However, be aware that misbehavior will accompany any changes, no matter how well introduced.

___Keep directions and redirections brief and to the point (five words or less).

___Provide transition times. Build these three to five minute time periods into your schedule.

___Stay away from power struggles with children. Try to fulfil each child's needs in positive ways.

___Tell children what you want them to do, not what what you don't want them to do.

___Set up the environment to create the types of behaviors that you want.

___Model "sharing" behaviors but don't be too rigid in expecting children to share.

___Try role playing appropriate behaviors for troublesome situations.

___Provide materials that elicit social interactions, such as a wagon, jump rope, two-handled crate.

___Provide "feelings" language appropriate to happenings which involve feelings.

___Label personal possessions to establish ownership/identity.

___Provide opportunities for children to interact socially without adult intervention.

Play Participation

Every child participates in the "Self-Selection/Play" period each day. The degree and extent to which each child participates depends on his individual characteristics. The DPHISC model has adapted the play categories of Mildred Parten, Sara Smilansky and Jean Piaget among others as guidelines for informal observation and evaluation of play behaviors. (Table I) The categories described by Parten focus on the social aspect of play. The teacher's role, in addition to participating in and extending play, is to observe and record each child's play patterns. These observations can include recording the type of activity, the location, the materials used, any other children involved and finally, the category of play. The play observation is usually made for approximately 10-15 minutes and is completed on a monthly or bi-monthly basis. Based on the information from these observations, the teacher can then better use the child's play to extend his cognitive, problem solving, language and social skills. Strategies towards this end might include modeling play behaviors, introducing additional materials or props, introducing an 'unknown' or novel material, creating a problem, or providing the language appropriate for a role. As always, it is important to give consideration to the developmental ages of the play categories when setting objectives.

Play can be a significant opportunity for the development of social language if teachers, parents, and other involved adults make a concerted effort to encourage children to really communicate with each other. This means that children do not rely on adult intervention to request materials, to request 'turns', to reconcile conflicts, to get someone to move, to join a group, to direct a play episode or other similar pragmatic situations. Rather, children "talk", verbally and nonverbally, to each other. This may be somewhat of an adjustment for both the adults and the children involved but it is possible and it certainly is worth it. One of the benefits is that conflicts are usually solved without adult intervention. Another benefit is that it allows the teacher to spend less time on classroom management and more time in guiding learning and making observations.

Social Awareness

The Social Awareness aspect of the curriculum includes 'peer interactions', 'group skills', and 'adult interactions'. Objectives relate to manners, self-concept, feelings, attention, turn-taking, and following directions. This is another important area that must be addressed if children with hearing impairments are to truly join the mainstream of society. Children who are not hearing impaired learn at a fairly early age to greet others, apologize to others, and exhibit acceptable behavior in public. Children with hearing impairments must be taught these skills, provided many opportunities for practice, and expected to demonstrate these skills. In the classroom and/or at home, objectives can be selected as the need arises and adapted or changed as the child's needs change.

Independence

Objectives related to 'self-help skills', 'work/play/skills', and 'survival skills' are contained in the independence section of the social model. These objectives were developed from normal developmental sequences and direct classroom experiences.

Student learning objectives are selected and worked on with each child on a two to three week basis. The "Self-Care Observation and Checklist" (see Evaluations) is used as an assessment tool. At the end of the two to three weeks, a new objective is selected whether the child has achieved the first one or not. The first objective will be returned to at a later time as the child's needs indicate.

TABLE I

A. Social Play Categories

1. Unoccupied: The child is not playing but occupies himself with watching anything that happens to be of momentary interest or exhibits behaviors such as just standing around, playing with his own body, following an adult, sitting in a chair and glancing around.

2. Onlooker: The child is definitely watching a particular child(ren). He may verbally interact with the others but doesn't overtly enter into the play.

3. Solitary: The child plays alone and independently with toys that are different from those used by the children within speaking distance, and makes no effort to get close to other children. He pursues his own activity without reference to what others are doing, typical of children up to C.A. 2½.

4. Parallel: The child plays independently but alongside other children. He does not try to influence the others; there is little if any verbal interaction. He plays with toys that are the same or different than the other children. Typical of children C.A. 2½ -3½.

5. Associative: The child plays with other children. Everyone engages in similar if not identical. activity. The children do not subordinate their individual interests to that of the group; instead each child acts as he wishes. Verbal interaction concerns the common activity. There is borrowing and loaning of materials. Typical behavior of children C.A. 3½-4 or 4½.

6. Cooperative: The child plays in a group that is organized for the purpose of making some material product, striving to attain some competive goal, dramatizing adult or life situation, or playing formal games. There is an extended amount of verbal interaction. Typical of children C.A. 4 and older.

(Parten, 1932)

B. Cognitive Play Categories

1. Functional/Practice Play: Play involves mastering motor skills, causing events to recur, and experiencing with his senses. Typical of M.A. 0-2½.

2. Symbolic Play: Motor experiences are encoded in symbols: using objects, pretending, representing with constructive materials. Typical of M.A 2-4.

3. Games with Rules: From informal to formalized. From individually made-up rules to rules designed for the situation to games with established rules.

C. Process Assimilation in Play

1. Exploration: "How to ____?" "What is it?"

2. Manipulation: "What can it do?"

3. Transposition of function: "What can I do with it?"

D. Block Building Play Stages

1. Nonconstruction:

   - carrying
   - making noise
   - making body and/or social contact with others

2. Rows-Vertical and Horizontal:

   - must use at least two blocks
   - any side or end of block may be used
   - a row is only one block high and one block wide, sides or ends must touch
   - may be combined and elaborated into walls or floors
   - much repetition

3. Bridges:

   - at least three blocks must be used; two blocks are placed parallel with the third spanning the space in between
   - may be combined and elaborated with rows, towers, walls, floors

4. Enclosures:

   - at least three blocks must be used
   - the blocks are placed in a closed-sided shape
   - repetition and elaboration

5. Patterns:

   - appear once child acquires a facility in use of blocks
   - pattern is generally balanced, symmetrical
   - patterns are not names

6. Naming for Play:

   - name related to function of building
   - incorporates earlier construction techniques

7. Naming and Using for Play
   -structure is utilized in dramatic play

E. Sociodramatic Play Components

-use of objects
-use of actions
-use of situations
-voluntary engagement
-two children involved
-agreement to procedure of play
-lasts five minutes or longer
-variation or successive elaboration of theme of play

F. Play as a Learning Medium

1. Functional: simple repetitive muscle movements with or without objects

2. Constructive: manipulation of objects to construct or create something

3. Dramatic: substitution of imaginary situation to satisfy child's wishes and needs

4. Games: acceptance and adjustment to rules

OBJECTIVES

I. Play Participation

  A. Social Behaviors

    1. Onlooker

      -watch other children when prompted
      -watch other children without prompting
      -watch other children and verbally or nonverbally (not physically) interact

    2. Solitary

      -play alone with familiar material
      -play alone to practice skill
      -play alone with novel material
      -play alone to solve problem or achieve goal

    3. Parallel

      -play alongside using different materials
      -play alongside using similar materials
      -play alongside with occasional verbal interaction
      -play alongside with ongoing verbal interaction

    4. Associative

      -engage in similar activity
      -engage in identical activity
      -borrow materials
      -lend materials
      -verbally interact with regards to the common activity

    5. Cooperative

      -join group organized for activity
      -participate in group dramatizing life or adult situation
      -participate in group making a product
      -participate in group striving for a competitive goal
      -participate in group playing a formal game
      -initiate organization of group

B. Sociodramatic Components

1. Use of objects

   - -make believe with adult intervention
   - -make believe without adult intervention
   - -make believe with realistic objects
   - -make believe with abstract objects
   - -make believe with verbal substitute

2. Use of actions

   - -make believe with adult intervention
   - -make believe without adult intervention
   - -integrate several make believe actions
   - -sequence several make-believe actions

3. Use of situations

   - -make believe with adult intervention
   - -make believe without adult intervention
   - -vary theme of play

4. Interaction

   - -participate with adult intervention
   - -participate without adult intervention
   - -initiate group of two
   - -join group of two
   - -initiate group of more than two
   - -join group of more than two
   - -assume clearly identified role
   - -assign roles
   - -agree to procedure of play
   - -initiate procedure of play

5. Duration

   - -maintain for five minutes
   - -maintain for ten minutes
   - -maintain for longer than ten minutes

II. Social Awareness

A. Peer and Adult Interaction

1. Manners

a. greetings

   - -wave
   - -wave and verbalize
   - -verbalize hi/bye with reminder
   - -verbalize hi/bye without reminder

b. apologies

- -imitate an apology
- -imitate and face other person with prompting
- -spontaneously face other person and verbalize an apology

c. manners (e.g. please, thank you, excuse me, bless you)

- -imitate manners
- -vocalize manners with reminder
- -vocalize manners spontaneously

d. socially acceptable behavior in the classroom

- -refrain from hitting others
- -refrain from throwing objects
- -refrain from grabbing toys/materials from others
- -refrain from interrupting conversations

e. socially acceptable behavior in public

- -with reminder
- -without reminder

2. Self concept

a. sharing

- -share with prompting by teacher
- -share with prompting by another child
- -share with others spontaneously

b. helping others

- -upon request of teacher
- -upon request of peer
- -self initiated

c. recognizing ownership of materials/toys

- -is careful of things
- -willingly give up material/toy to adult peer
- -refrain from handling materials not intended for his/her use
- -ask permission to use toy that peer is playing with
- -respect peer constructions

3. Feelings

a. self

-hug and carry doll or soft toy
-imitate motor and facial expressions of feelings
-allow self to be touched by peers
-verbalize feelings
-show evidence of preferences
-show pride in accomplishments

b. others

-hug, pat, kiss familiar persons
-demonstrate sensitivity to feelings of others

4. Socialization

a. peers

-imitate movements of peer at play
-take part in motor activity with peer
-take part in manipulative activity with peer
-follow peer to activity
-physically initiate contact with peer
-use gesture(s) to show object/action to peer
-verbally initiate contact with peer
-participate in project with one other child
-participate in group project
-lead peers

b. adults

-allow adult to join play activity
-ask adult to join play activity
-get and maintain attention of adult in acceptable manner
-imitate adult in play activity

B. Group Skills

1. Attention span

a. duration

-attend to task for two minutes
-attend to task for five minutes
-attends to task for ten minutes
-attends to task for more than ten minutes

b. strengths

- attend in one-to-one situation
- attend independently
- attend in face of distraction

c. focus

- make eye contact with adult
- attend to teacher
- attend to peers
- attend to teacher and peers

2. Turn-taking

a. waiting

- wait for turn upon suggestion
- wait turn

b. taking turns

- imitate simple motor activity after teacher in succession
- take turn when prompted
- take turn without prompting

3. Following directions

a. cooperation

- cooperate with adult requests sometimes
- cooperate with adult requests most of the time
- cooperate with adult request with minimal delay or resistance

b. directions

- follow directions by imitating actions of others
- follow simple commands
- wait for directions
- follow two-part directions

III. Independence

A. Self-Help

1. Grooming

a. toileting

- sit on toilet

-use toilet when placed
-indicate need to use bathroom
-stay dry all day
-stay dry all night

b. washing

-wash arms and legs in bath
-wash hands and face
-bathe self
-adjust water tap

c. other

-blow nose when reminded
-blow nose without reminder
-wipe nose when reminded
-wipe nose without reminder
-cover mouth when coughing when reminded
-cover mouth when coughing without reminder
-imitate brushing teeth
-brush teeth independently

2. Dressing

a. non-fastening

-put on/take off hat
-pull off socks
-cooperate in dressing
-put on socks and shirt
-put on mittens
-put on boots

b. fastening

-put on shoes
-take off shoes, coat, pants when unfastened
-finish zipping
-unfasten snaps
-put on coat or sweater
-snap/hook clothing
-unbutton large buttons
-button large buttons
-put zipper foot in catch
-buckle/unbuckle
-lace shoes
-tie shoes
-tie hood

c. other

- hang coat on hook
- find front of clothes
- select clothing appropriate for weather

d. hearing aids

- wear consistently
- replace or attempt to replace earmold
- insert own earmold
- notice acoustic howl
- turn aid on and off at appropriate times
- indicate when aid is not working
- test aid with voice when first put on
- adjust aid to most appropriate volume level

3. Eating

a. utensils

- eat with spoon independently
- hold and drink from cup with one hand
- use straw
- scoop food with fork
- pour into glass without help
- stab using fork and bring to mouth
- use correct utensils for food
- spread with knife
- cut with knife
- open ½ pint milk carton

b. general

- discriminate edible substances
- get drink from faucet without help
- feed entire meal to self
- prepare cold cereal
- prepare sandwich

c. table manners

- use napkin when reminded
- use napkin without reminder
- clean up spills when given cloth
- get own cloth and cleans up spills
- clear place at table
- pass out utensils
- help set table

4. General

a. safety

- overcome simple obstacles

-avoid hazards
-avoid common dangers
-stop and look at curb

B. Work/Play Skills

1. Self direction

a. planning time

-stand in center chosen for first play activity
-choose toy and bring back to planning area
-verbalize or gesture center chosen to play for first activity
-use planning board with prompting for first activity only
-use planning board without prompting for first play activity
-verbalize first play activity
-use planning board consistently throughout play period with reminder - (change, picture, verbalize activity, indicate center and plan)
-use planning board consistently throughout play period without reminder
-make own written plan with prompting
-make own written plan with two or more activities or centers involved in plan

b. initiation

-independently choose toy
-participate in adult-initiated play
-initiate own play activity
-continue play activity after adult initiates
-maintain play with continued adult intervention
-initiate and continue own play activity
-make choice when asked
-use adult as resource

c. attention

-play without adult for ten minutes
-stay with task with prompting
-stay with task independently
-stay within center with prompting
-stay within center independently

2. Classroom Responsibilities

1. Classroom Management

a. rules

- withdraw hand, say "no-no" when near forbidden object with reminder
- withdraw hand, say "no-no" when near forbidden object spontaneously
- accept limits set upon behavior by following when reminded
- accept limits set upon behavior by following independently
- remind other children of rules

b. "jobs"

- exhibit willingness to help
- attempt to help adult by doing part of chore
- pick up and put away toys with help of adult
- pick up and put away toys with specific direction from adult
- pick up and put away toys without direction
- clean up spills with help
- clean up spills without help
- complete unfamiliar task upon request
- complete familiar task without being asked

C. Survival Skills

1. Identifying Information

a. name

- tell first name
- tell first and last name

b. residence

- tell street name
- tell full address including house number

c. other

- tell birthdate
- tell phone number
- tell city name
- tell state name

2. Basic Communication Skills

a. acknowledge communication request

-make eye contact with adult or peer
-nod head yes or no to object
-indicate wants and needs verbally - repeated phoneme, loud outburst, approximation of word)

b. regulation/request

-approximate the following: more, no, stop, come, bathroom, eat, up, move, wait, look, open, close, help me, I want, I don't want
-use the previous vocabulary consistently in the classroom

VI. ACTIVITY PAGES

PLAY

The materials and activities listed in the first part of this section are intended for that part of the schedule referred to as "Play" "Work" or "Self-Selection" and therefore, are limited to things that require a minimum of teacher-direction and/or supervision. For each objective, materials and activities are organized by centers. This is intended as a representative sample and should not restrict the choice or placement of materials.

A second section follows for that part of the schedule referred to as "Small Group" and "Large Group".

Logico-mathematical Knowledge
CLASSIFICATION

(1) Opportunities for free exploration of collections.

Note: Materials listed should be provided in quantity and with variety.

ART CENTER

- -writing instruments (crayons, markers, paint, chalk)
- -wall paper samples
- -paper scraps (different colors, sizes, shapes)
- -"junk" (scraps of straws, yarn, toothpicks, popsicle sticks, bottle caps)
- -cut-out magazine pictures

WOODWORKING CENTER

- -screws (different types, sizes)
- -nails (different types, sizes)
- -telephone wire
- -nuts and bolts (different types, sizes)
- -die-cut plywood pieces (commercially available)
- -styrofoam fillers (different types)
- -screwdrivers (different types)
- -golf tees, pegs, nails and "non-poundable" items (e.g. marbles, pennies)

BLOCK CENTER

- -cars and trucks
- -unit blocks
- -Legos
- -table top blocks
- -boxes (different sizes, types)
- -animals

QUIET
CENTER

-colored cubes

-colored counters

-buttons

-barrettes

-flannel pieces (different colors, sizes, shapes)

-pom poms

-cake decorations (plastic fish, babies, bottles, flowers, shoes)

-playing cards

-magnetic letters and shapes

-beads

LISTENING
CENTER

-rhythm instruments

-shaker blocks/eggs

-blowing instruments

-animal turn-over sound boxes

-stringed instruments

-sound-making junk, e.g. spoons, pots and pans, water glasses, paper towel tubes

WRITING
CENTER

-writing instruments (pencils, pens, markers, crayons)

-paper (different sizes, weights, textures)

-envelopes

-stamps (ink and lick)

-greeting cards

-fasteners (paper clips, rubber bands)

SCIENCE CENTER	-nuts (different types) -leaves (mounted and covered with contact paper -flowers (pressed between contact paper -rocks -shells -"junk" -plastic animals, including dinosaurs -sensory materials
HOUSE CENTER	-beans (different types) -noodles (different types) -poker chips -silverware -dishes -cans (empty and clean, with labels) -boxes -bottles -shoes -clothing
SAND/WATER	-buried treasures (beans, bottle caps, stones) -replace water with different types of beans or Easter grass or leaves or foamies -teddy bear counters and colored plastic cups in water -"float and sink" items in water

These "collections" may be presented alone or in combination with other collections. For example, different types of screws may be put out or different types of nuts and bolts may be put out.

Containers:

- shoe boxes
- pie tins
- trays
- muffin tins
- plastic boxes
- baskets
- juice cans
- divided shelves
- drawers
- bowls
- labels

The use of the materials in an activity may elicit the grouping. For example, the child may put only animal stamps on one envelope, only vehicle stamps on another envelopes, and only shape stamps on another envelope.

(2) Opportunities for purposeful groupings.

The collections listed under the previous objective may be used again if they are accompanied by an activity or container that can elicit a specific type of grouping. For example, under the previous objective, screws, nuts and nails may have been available along with plain juice cans for sorting and storage. Under this objective, each juice can would be labelled with a picture or drawing of a screw or an nail or a nut. Similarly, under the previous objective paper scraps of different colors, sizes, and shapes may have been available with plain sheets of paper and paste. Under this objective, different shapes could be drawn on the sheets of paper prior to their use by the children.

The materials listed here, and not previously, are less conducive to "open exploration" and more conducive to provoked groupings.

ART CENTER

- -crayons and cans covered with colored construction paper
- -different types of paper and labelled storage boxes
- -shelves labelled to group materials by function
- -cut out magazine pictures and sheets of paper, each with a starter picture

WOODWORKING CENTER

- -screws, nails, nuts and labelled juice cans
- -die cut wood scraps with a starter piece glued/nailed to plywood sheet
- -nails, screws, pegs, golf tees and different sized holes in piece of wood

BLOCK CENTER

- -outlines of blocks taped to shelf
- -shape bean bags and shape floor mats
- - cars and color garages

QUIET CENTER

- -sorting box
- -attribute box
- -colored bean bags and colored boxes
- -classification flannelboard set
- -shape mats and shape bean bags
- -"Three Little Pigs" flannelboard set
- -classification lotto game
- -flannel shapes

LISTENING CENTER

- -labelled boxes with rhythm instruments, e.g. blowable and not, shakeable and not, hittable and not
- -box of objects and directions on tape cassette or language master cards, e.g. "find all the round things" or "find all the things to write with"
- -records or props for songs that "group" actions or movements

WRITING CENTER

- -labelled containers for different types of writing instruments
- -inkpad, stamps, and a starter picture on each piece of paper
- -greeting cards and large envelopes labeled with seasonal picture
- -different fastening devices (e.g. paper clips, rubber bands, brass fasteners, butterfly clips, bulldog clips, loose leaf rings)

SCIENCE CENTER	-leaf color forms -Touch 'n Tell (textured shapes) -sensory materials with labelled containers (color or similarity or sense used, for example -nature collections with labelled containers (e.g. shape, origin) -magnets and objects with labelled containers (i.e. pulls/doesn't pull)
HOUSE CENTER	-doll house and furniture -assorted color dishes -barrettes and colored storage boxes -labelled dresser drawers (color or function by or owner or category) -prop boxes (dramatic play)
SAND/WATER	-round cake pans and "junk" (stones, styrofoam fillers, beans, pine cones) to make different kinds of cakes -"float and sink" items with labelled containers

(3) Opportunities to re-group materials.

Note: The distinguishing characteristic of these "collections" is that they can be sorted in more than one way. It is suggested that containers not be labelled (as under the first objective) in order to leave open the possibility of re-grouping.

ART CENTER	-paper scraps (size, color, shape) -cut out magazine pictures -clay (round, flat) -"junk" scraps of straws, yarn, toothpicks, popsicle sticks, bottle caps) -gummed shapes -assorted noodles colored with food coloring
WOODWORKING CENTER	-telephone wire (color, length) -die cut plywood pieces (shape, size) -screwdrivers (size, type) -sandpaper (size, shape, coarseness)
BLOCK CENTER	-boxes (size, closure) -animals (size, type) -cars and trucks (color, size) -people (size, sex, hair color) -table top colored wooden block set (color, shape)

QUIET CENTER

-buttons (size, color, style, number of holes)

-pom poms (color, size)

-attribute blocks (size, color, shape)

-flannel pieces (color, size, shape)

-playing cards (number, color)

-beads (shape, colors, size)

-Bag of Buttons (shape, color, size)

LISTENING CENTER

-bells (straight/round, number of bells)

-dance props, e.g. scarves, ribbons (color, length)

-taped directions and box of objects to sort

WRITING CENTER

-paper (size, weight, texture)

-stamps (function, category)

-greeting cards (holiday, size)

-stencils (size, shape)

-Word Maker Letter Kit (color, shape) or magnetic letters

SCIENCE CENTER

-rocks (color, size, surface)

-leaves (color, shape)

-pressed flowers (color, size)

-daily weather pictures (temperature, sky conditions)

HOUSE CENTER	-clothing (size, top/bottom, function, weather)
	-dishes (function, color)
	-shoes (size, color, male/female)
	-foods (storage, food group, color)
	-dolls (sex, size)
	-dollhouse and modular furniture
	-buttons for cooking (size, color)
SAND/WATER CENTER	-pails (color, size, solid/with holes)
	-sand mold letters (color, shape)
	-water and miscellaneous objects (float/sink, color, size, function, wetness)

(4) Opportunities to think about two properties simultaneously.

Note: For this objective, the teacher must often provide more than the usual amount of guidance in order to provoke the classification; simply providing the materials is usually not sufficient.

ART CENTER

- cut out paper shapes: yellow circles, red triangles, green squares
- different-shaped pasta dyed with food coloring, e.g. red macaroni, green rotini, yellow shells
- limit each item in the center to one color, e.g. clay-yellow, paint-red, paper-blue
- counting sticks in six colors and five sizes

WOODWORKING CENTER

- set up storage of nails, screws, and bolts by size and category, e.g, small and nail, big and nail, small and screw, big and screw, small and bolt, big and bolt
- colored mosaic tile pieces
- die cut plywood pieces pre-painted with tempera or markers

BLOCKS CENTER

- set up storage of accessories by size and category, e.g. small and animals, big and animals, small and cars, big and cars, small and people, big and people
- unit and table-top-sized blocks
- set up storage of accessories by type of vehicle and color
- set up storage by size and color for Duplo or Lego pieces

QUIET CENTER	-"venn diagram" circles and attribute blocks -attribute blocks and labelled sorting tray -felt shapes and labelled divisions on flannel board -Multi-variant Beads -parquetry blocks and labelled sorting tray -paper doll clothes -matrixes
LISTENING CENTER	-taped directions for finding an object described with two characteristics
WRITING CENTER	-red, blue and black markers; red, blue and black pens; and red, blue, and black pencils -set up chart for rubber stamps by category and color of ink -colored alphabet letters
SCIENCE CENTER	-Scratch 'n Sniff stickers -Texture squares -set up storage of balloons by size or shape and color
HOUSE CENTER	-plastic colored dish and utensil set; can set up storage to provoke classification, e.g. red and fork, yellow and plate, blue and knife -dollclothes; can set up storage by size and category

-empty food cans and boxes can be sorted by food group and container

SAND/WATER CENTER

-plastic colored shape molds and miscellaneous objects that could be red and round, yellow and square, green and oval

-squirt bottles can be sorted by size and type of cap

-leaves in water table can be sorted by type and color

Logico-mathematical Knowledge
SERIATION

(1) Opportunities to actively explore relative differences among two or more objects.

Note: Provide two or more of each item with variations according to the dimension listed. The differences should be very obvious and very gross, e.g. very heavy pieces of wood and pieces of wood and pieces of balsa (light) wood.

ART
CENTER

-paper (size): long/short, wide/narrow, large/small

-paper (quality): colors, thin/heavy smooth, textured

-paint (quality): types, colors, thin/thick, with added ingredients such as rice or sand, chilled/warmed

-crayons (size): thick/thin, short/long

-crayons (size): colors

-paint (quantity)

-paintbrushes (size): long/short, thick/thin

-paintbrushes (quality): brush, sponge, feather

-playdough (quantity)

-playdough (quality): colors, textures from added ingredients

WOODWORKING
CENTER

-wood scraps (size): thick/thin, heavy/light, long/short, wide/narrow

-nails, screws, bolts (quantity)

-sandpaper (quality): different grades

-sandpaper (size)

-screwdrivers (size)

-wrenches and bolts (size)

-storage cans (size)

-wooden spools (quantity)

-bottle caps (quantity)

BLOCK CENTER

- -blocks (size): unit, cardboard, plastic
- -transportation items (size)
- -transportation items (quality): color, speed
- -animals (size)
- -animals (quantity)
- -blocks (quantity)
- -boxes (size)
- -Tinker toys (size): "preschool" and regular
- -Legos (size): "preschool" and regular
- -plastic tubing (size): length, diameter

QUIET CENTER

- -pegboard and pegs (size): diameter, height
- -pegboards and pegs (quality): color, plastic, wooden
- -pegboards and pegs (quantity)
- -beads (size)
- -balance (quality): heavy/light
- -attribute blocks (size): large, small, thick/thin
- -counters (quantity)
- -texture blocks (quality)
- -balls from Peabody Early Experience Kit
- -Touch 'n Tell

LISTENING CENTER

- -taped sounds (quality): loud/quiet, speed
- -taped music (quality): loud/quiet, speed
- -rhythm instruments (quality)

- record player (quality): loud/quiet, speed
- radio (quality): loud/quiet
- scarves and ribbons (size): long/short, wide/narrow
- sound tubes (quality): fill paper towel or toilet paper rolls with different items - rice, bells, buttons, noodles, for example - and cover ends
- musical glasses (quality)

WRITING CENTER

- pencils (size): thick/thin, long/short
- paper (size)
- letter stencils (size)
- scented markers (quality)
- different colored crayons (quality)
- paper: sand, wall, corrugated, shelf (quality)
- pens: thick, thin, ball point, push-button (size)
- pencils: thick, thin, colored (size) (quality)

SCIENCE CENTER

- weightboxes (quality): fill shoe or cigar boxes with different weights and seal shut
- weather charts (quality)
- thermometer (quality)
- magnifying lens and microscope (size)
- feely boxes for hands (quality)
- feely trays for feet (quality)
- rocks, shells, nuts (quantity)
- rocks, shells, nuts (quality): weight, texture
- growth charts (size)
- fans/windmils (quality): speed

-balance or scales (quality): weight

-"tote box": put rope handles on either side of a milk crate so children can carry items of various weights

-glue objects to cardboard and tape cardboard to underside of table

HOUSE CENTER

-keys (quantity)

-fabric swatches (quality): textures

-spoons (size) (quantity)

-dishes (size) quantity)

-lamps (quality): brightness

-empty food cans, boxes, and bottles (size)

-cooking experiences (quality): temperature, texture speed

-cooking experiences (quantity)

-mixing bowls (size) (quantity)

SAND/WATER CENTER

-pails and cups (size) quantity)

-eyedroppers, squirt bottles, and basters (size) (quantity)

-spoons and shovels (size) (quantity)

-sifters and strainers (quality): speed

-tubing (size)

-funnels (quality): speed

-funnels (size)

(2) Opportunities to fit one ordered set of objects to another set:

Materials: There should be no more than four objects in each set, e.g. four pots and four lids. The objects in each set must vary according to size, according to quality, or according to quantity.

ART CENTER

- boxes to match sizes of paper
- different sized containers for different amounts of play-dough
- hang paintbrushes (with hole drilled in handle) on hooks, beneath the hooks tape outlines of different sized paintbrushes
- outlines drawn on paper for pasting different-sized pieces of paper
- boxes for wall paper samples. tape example to bottom of box from smooth to most bumpy
- set lids of thin, medium, and wide magic markers in plaster of pearls

WOODWORKING CENTER

- nuts and bolts (size)
- screws and screwdrivers (size)
- drilled holes and dowl rods (size)
- wrenches and bolts (size)
- wooden spools and dowl rods (size)
- Bolt Board (commercial)
- Nut Board (commercial)

BLOCK CENTER

- tape outlines of block shapes to storage shelves

-different sized "barns" for different sized animals

-different sized "garages" for different sized cars and trucks

-boxes and lids

-Graduated Slot-a-rounds

QUIET CENTER

-pegboards and pegs

-"Numberite"

-beads (varying in hole diameter) and string (varying in thickness)

-graduated size puzzles

-flannelboard story: Goldilocks and Three Bears"

-stacking barrels (size)

LISTENING CENTER

-cymbals (size, quality)

-take-apart xylophone (size, quality)

-tape recorded directions, e.g. "put the soft hat on the soft baby, put the hard hat on the hard baby" or "put the largest cup on the largest plate, but the smallest cup on the smallest plate".

WRITING CENTER

-boxes to match sizes of paper

-cards and envelopes (size)

-die cut tagboard letters and insets (size)

-die cut object shapes labeled with words (size)

SCIENCE CENTER	-Tell by Touch -rocks and clay imprints (hardened) -shells and plaster of paris imprints -Reels and Whells
HOUSE CENTER	-plastic bowls and lids (size) -pots and lids (size) -bottles and tops (size) -dolls and shoes (size) -keys and locks (size)
SAND/WAter CENTER	-squirt bottles and tops (size) -tubes and corks (size) -funnels and tubing (size)

(3) Opportunities to compare objects by size

Note: In contrast with the first objective, the materials here illustrate graduations in size (up to four): big-little, tall-short, high-low, fat-thin, long-short, narrow-wide.

ART CENTER

- -paper: long-short, wide-narrow, large-small
- -crayons: thick-thin, short-long
- -paintbrushes: wide-narrow, long-short
- -playdough: large-small, long-short
- -straw, yarn: long-short
- -printing or painting utensils (spatulas, toothbrushes, toothpicks, sponges)
- -painting surfaces: high-low

WOODWORKING CENTER

- -wood scraps: heavy-light, thick-thin long-short, wide-narrow
- -screwdrivers: large, small
- -wrenches: large-small
- -bolts: large-small
- -nails: large-small
- -screws: large-small
- -storage cans: large-small

BLOCK CENTER

- -blocks: long-short, high-low
- -transportation items: large-small, long-short
- -animals: large-small
- -boxes: large-small
- -plastic tubing: long-short

-tinker toys: long-short

-Legos: tall-short, large-small

-doll family

-tracings of blocks for clean-up

-hoops: large-small

-rope: thick-thin

QUIET
CENTER

-pegs and pegboards: large-small tall-short, thick-thin

-beads: large-small

-attribute blocks: large-small, thick-thin

-flannelboard story "Goldilocks and Three Bears"

-stacking barrels

-stacking ring

-flannel shapes: large-small, long-short

-Cuisenaire rods (four sizes)

-graduated size pictures

-graduated size puzzles

-Size Sorting Posts

-Simple Forms Discovery Board

-Size and Color Discovery Board

LISTENING
CENTER

-scarves and ribbons: long-short

-tambourines: large-small

-suspend rhythm instruments and noisemakers (shells, bamboo, washers) from overhead: high-low

-tracings of four different sized instruments

WRITING CENTER

-paper: large-small
-letter stencils: large-small
-envelopes: large-small
-tracing patterns: long-short, narrow-wide
-pencils: long-short

SCIENCE CENTER

-hand prints
-feet prints
-magnets: large-small
-growth chart: tall-short
-rubber or plastic animals

HOUSE CENTER

-spoons: large-small
-dishes: large-small
-cans, boxes, bottles: large-small
-doll family
-dolls: large-small, tall-short
-shoes: small-large
-clothing items: large-small
-tracings of dishes and utensils for clean-up
-baskets: large-small
-hanging plexiglass "windows": high-low

SAND/WATER CENTER

-pails, bowls and cups: large-small
-measuring cups: large-small
-measuring spoons: large-small

-funnels: large-small
-tubing: long-short, wide-narrow
-shovels: large-small

(4) Opportunities to compare objects by quality

Note: In contrast with the first objective, the materials used here illustrate graduations in quality (up to three): dark-light, hot-cold, loud-quiet, smooth-rough, soft-hard, heavy-light, high-low, fast-slow, old-new, wet-dry

ART CENTER	-textured paint: smooth-bumpy -fabric pieces: smooth-rough -playdough and clay: soft-hard -paint: dry-wet -paper: smooth-bumpy, colors, light-heavy -painting or drawing surfaces: smooth-bumpy
WOODWORKING CENTER	-sandpaper: smooth-rough -wood: heavy-light, smooth-rough -hammers: heavy-light, loud-quiet
BLOCK CENTER	-blocks: light-heavy, soft-hard -block constructions: high-low -vehicles: fast-slow
QUIET CENTER	-balance: heavy-light -attribute blocks: colors -Lite Brite: dark-light

LISTENING CENTER	-different types of bells -musical glasses (water levels) -cassette tape of singing a song at different speeds -cassette tape of singing a song at different pitches -cassette tape of singing a song at different volumes -sound tubes: quiet-loud -xylophone -kazoos -Giant Sound Cylinders: loud-quiet, heavy-light
WRITING CENTER	-pencils: blunt-sharp -tracing patterns: smooth-bumpy -painting pencils: wet-dry
SCIENCE CENTER	-box and several types/strengths of flashlights: dark-light -weight boxes: fill shoe or cigar or boxes with different weights and seal shut: heavy-light -weather charts: sunny-cloudy, hot-cold -rocks, shells, nuts: heavy-light, old-new, rough-smooth -fans and windmills: fast-slow

HOUSE CENTER

-shoes and clothing: new-old
-suspend plastic food items, dishes, utensils, and food boxes from ceiling: high-low
-lamp: dark-light
-real food items: heavy-light

SAND/WATER CENTER

-colored sand: color
-colored water: color
-colored rice: color
-warm to cold water: temperature
-items which float, sink or are in between
-water pump or basters: fast-slow
-sand sieve: fast-slow
-buckets: heavy-light
-cylamen light sticks: light-dark

(5) Opportunities to compare groups of objects by quantity.

Materials: In contrast with the first objective, the materials used here illustrate graduations in quantity (up to four). The materials need to be structured or contained in some way into groups of different quantities.

ART
CENTER

-popsicle sticks
-crayons
-markers
-paint
-playdough

WOODWORKING
CENTER

-nails (in jars)
-screws (in jars)
-nuts (in jars)
-bolts (in jars)
-wooden spools
-bottle caps

BLOCK
CENTER

-unit blocks (in piles)
-one inch cubes (in baskets)
-animals

QUIET
CENTER

-on 3 x 5 cards, mount one picture of each familiar classroom item, e.g. chair, hearing aid. Keep tally score of how many of each are in the room

	-unifix blocks -string and beads -counting rods -number charts -box of items to be color-graphed -pegs and pegboards -counters
LISTENING CENTER	-language master and pictures -cassette tape and booklet -cord handles with differing number of bells
WRITING CENTER	-journal books with varying page quantities -salt writing boxes (differ amount of salt) -printed models of words (differ in number of letters)
SCIENCE CENTER	-rocks -shells -nuts

HOUSE CENTER	-cut out paper food shapes (with plates) -bowls -plastic eggs -dishes -spoons -keys (on a key ring) -cooking experiences
SAND/WATER CENTER	-sand (in bowls, pails, cups, spoons) -water (in bowls, pails, cups, spoons) -styrofoam fillers (in bowls, cups, spoons)

(6) Opportunities to arrange several objects in order by size.

Note: In contrast with objective 3, these materials are to be put in a series according to size. Predictions about what will come next are to the encouraged.

ART CENTER

-pieces of yarn
-pieces of straw (drinking)
-cut out shapes
-gummed tape
-playdough balls or snakes
-graduated size clay cutters

WOODWORKING CENTER

-screwdrivers
-wrenches
-storage cans
-styrofoam balls
-wooden spools

BLOCKS CENTER

-doll family
-graduate size boxes
-cardboard tubes
-vehicles
-unit blocks

QUIET CENTER

-graduated size pegs
-graduated size towers
-graduated size rings
-graduated size puzzles

	-marbles and opaque tube -stacking barrels -flannel shapes -beads -Montessori cylinder blocks -Feel and Match Thicknesses
LISTENING CENTER	-musical waterglasses -take apart xylophone -ribbon (hang with clips) -scarves (hang with clips)
WRITING CENTER	-boxes of envelopes -cut out letters (order in file folders) -address labels -index cards and letter holder -books and book rack
SCIENCE CENTER	-cut out body tracings of children -cut out hand tracings of children -cut out feet tracings of children -magnets (tracings for storage) -dinosaurs -shadows (black construction paper silhouettes) -measuring sticks -balloons

HOUSE CENTER	-shoes -baskets -plates -cans
SAND/WATER CENTER	-plastic tubing -measuring cups -measuring spoons -funnels -graduated size sand molds

Logico-mathematical Knowledge
SPATIAL RELATIONS
TOPOLOGY

(1) Opportunities to explore closed and not-closed spaces.

ART CENTER

-pipe cleaners

-string

-paper chains

-paper: whole, with holes, with parts cut out/off, shapes

-painting

-"Finish the Picture" drawings of everyday objects

-paint using wadded-up newspaper

-dot-to-dot pictures

WOODWORKING CENTER

-wire

-wood scraps

-lock board with doors

-Cubes, Bobbins, and Beads

BLOCKS CENTER

-Bristle Blocks

-Legos

-tape roads on the floor

-snap ropes from Peabody Early Experience Kit

-unit blocks

-fencing for animals

-boxes and crates

-cardboard tubes

-train and railroad tracks

	-crawl-through tunnel -Giant Legos and balls -bean bags and targets (open or closed) -ball and ar ch or tunnel -cages for animals -Rig-a-majigs
QUIET CENTER	-Lite Brite -puzzles -Star Links -Boob-Tubes -Marble Run -Tour-a-billes -Magnetic fishing pole through hole in top of box -crepe fit-a-form puzzles -Mosaic Festival -shape sorter
LISTENING CENTER	-hoola hoops to dance in and out of -bells, straight (open) and curved (closed) -recorder (flute) -hanging cymbals and triangles -scarves and ribbons (some tied end-to-end, others not)
WRITING CENTER	-Etch-a-Sketch -salt box writing -tracing patterns

	-alphabet letters for tracing -wooden alphabet inset lette -magnetic alphabet letters -paper with holes cut-out -toothpicks
SCIENCE CENTER	-magnetic maze -Color Goggles -magnets
HOUSE CENTER	-tent -containers -can opener -shelves, refrigerator, washing machine -coffee can and margarine tub lids with openings cut out -hangers
SAND/WATER CENTER	-wet sand and objects to make paths -dry sand and objects to make paths -plastic tubes -plastic plumbing and eavestroughs
GENERAL	-use dividers, boxes, crates, shelves, tape, hanging sheets, string to mark boundaries

-crawl-through tunnel
-Rotoplay Panels or Snap Walls

(2) Opportunities to explore the relationships between "parts" and "wholes".

Materials: Materials for this experience will be either a "whole" with observable "parts" (w-p) or "parts" to make up a "whole" (p-w).

ART CENTER

- -make clay or paint imprints with different parts of an object; a second person can guess which part was used (w-p)
- -collage materials (p-w)
- -printing with vegetables cut into parts (p-w)
- -materials for paper bag puppets (p-w)

WOODWORKING CENTER

- -"Bolt-tile Construction Set" (p-w)
- -"Growing Engineer" (p-w)
- -"Gears Go Round" (w-p)
- -Take-apart Workbench (w-p)

BLOCKS CENTER

- -Lincoln Logs (p-w)
- -unit blocks (p-w)
- -Legos (p-w)
- -vehicles (w-p)
- -pulley (w-p)
- -block road (w-p)
- -train and track (p-w)

QUIET CENTER	-display pictures of objects and fill a box with "parts" from these pictures, e.g. house-nail, pot-handle (w-p) -popchains (p-w) -puzzles (pow) -"Rainbow Ball" (p-w) -Color form pictures (w-p)
LISTENING CENTER	-"Rainbow Bell" (p-w) -tape record a portion of a song, to be finished by the listener (w-p) -props for songs that change a key word/phrase in each verse, e.g. "This is the Way..." (w-p) -take-apart xylophone (p-w) -piano or organ (w-p)
WRITING CENTER	-cut-out letters to paste and form one's name (p-w) -alphabet tangrams (p-w) -magnetic letters and printed model of each child's name (p-w) -"Letter Perfect" (w-p) -typewriter (w-p) -click-type pen (p-w)
SCIENCE CENTER	-Flannel face (w-p) -Flannel body parts (w-p) -nature puzzles (p-w)

	-fruits (w-p) -plants (w-p)
HOUSE CENTER	-brushes (w-p) -necklaces (p-w) -cooking experiences (p-w) -plastic take-apart eggs (p-w)
SAND/WATER	-bury pieces of a simple jigsaw puzzle in the sandbox (p-w) -tape large picture of object to bottom of sandtable or cardboard box. cover with dry sand or foamies. parts will be exposed as child digs (w-p) -waterfall made from joined "trough" pieces (w-p) -"Bath Blocks" (p-w)
GENERAL	To focus attention on the parts of a whole, make a change related to the part. For example, plug the hole of the funnels or punch holes in the side of a pail.

(3) Opportunities to explore distances

Note: These materials address the two components of this experience: (1) movement between two point and (2) making a judgment about the distance between two points.

ART CENTER	-string -dip ping-pong balls or little cars in paint. roll across table covered with paper. (put up 4" cardboard barriers around the sides of the table) -painting with/without given endpoints -footprints and shelf-paper -model paintings and/or drawings for copying (reconstructing) -hang newsprint roll paper along wall to paint while moving along side
WOODWORKING CENTER	-wire and nails -model constructions for copying (reconstructing) -string, wooden, spools, and endpoints for tying string
BLOCKS CENTER	-string/rope -masking tape "roads" -"Gate Game": cut inverted U shapes along the bottom edge of a sturdy piece of

cardboard. Sandwich between two tables and hold in place with tape. Set up one or two objects on one side and a ball for rolling on the other side.

-transportation items with/without destinations

-model block constructions for copying (reconstructing)

QUIET
CENTER

-measuring tapes

-trundle wheel

-a rolling area for beads, marbles, spools, rings, cans, bottles, balls, washers, bearings

-model flannelboard "pictures" for copying (reconstructing)

LISTENING
CENTER

-listening and making tapes of sounds farther away

-long and short handles strikers for drums, and triangles

-dance or rhythms music and tape line on the floor to dance/move along

WRITING
CENTER

-tracing patterns

-model patterns for copying (reconstructing)

-chalkboard (large) with painted or affixed endpoints

SCIENCE CENTER	-telescope -binoculars -magnetic maze -marble run -pets
HOUSE CENTER	-dolls and dollhouse people (walk) -cans (roll) -bowling
SAND/WATER CENTER	-wet sand objects that make paths, e.g. shovels, scoops, blocks, cars -dry sand and objects that make paths -clear tubing that extends from water source to water table (may be taped along the wall)
GENERAL	-clothesline pulley: construct a double line pulley with a basket to transport items from one side of the room to the other -foot tracks around the room -obstacle course -riding toys

(4) Opportunities to explore linear arrangements

Note: These materials provide patterns to be recognized, reconstructed, and newly created.

ART CENTER	-string and different types of pasta with holes (colored or not) -pattern boxes: items that can be pasted to construct a pattern, e.g. foamies, toothpicks, wallpaper circles, cottonballs. provide each item in quantity. -ceramic tile pieces -sponge printing/painting with two to four different sponge shapes -clay and objects for making imprints, e.g. bottle caps, popsicle sticks, plastic letters, straws, forks, clayhammers, cookie cutters. -stickers
WOODWORKING CENTER	-pattern boxes: a box of items that can be nailed to a piece of wood to construct a pattern, e.g. plastic bottle caps, foamies, spools -wood glue and die-cut plywood shapes -dowel rods, paint, and wooden spools
BLOCKS CENTER	-unit blocks -colored blocks set

- unit blocks
- colored blocks set
- plastic chain links
- Cube Connectors
- Batistos
- Popoids
- Bristle Blocks

QUIET CENTER

- colored pushpins and styrofoam
- colored one-inch cubes
- pattern cards for colored one-inch cubes
- beads and strings
- pattern cards for beads and string
- buttons
- plastic cake decorations
- loop loom
- popbeads
- pattern cards for pegcards

LISTENING CENTER

- pattern cards for clapping
- pattern cards for short-long sounds with rhythm instruments
- pictured directions for playing two or three instruments in a pattern, e.g. bell-drum-triangle, bell-drum-triangle

WRITING CENTER

- ink pad and two to four different stamps
- Magnadoodle
- alphabet pattern cards, e.g. ABC ABC ABC ABC

	-number pattern cards, e.g. 123 123 123 123 -cut out letters -magnetic letters -typewriter
SCIENCE CENTER	-shells, nuts, rocks -eyedroppers, water, paper towel, and food coloring -crayons, paper, and nature objects for rubbings
HOUSE CENTER	-socks (hang on clothesline) -boxes and cans (order on shelf) -silverware -cups and saucers
SAND/WATER CENTER	-wet sand and things for "molding" including cups, bowls, cookie cutters and sand molds -wet sand and things for making imprints, e.g. cookie cutters, plastic tops from aerosol cans, thread spools, Bristle Blocks -styrofoam filler pieces, drinking straws, water tub

(5) Opportunities to explore alternate routes to an endpoint

ART CENTER	-simple maze drawn on plexiglass for paint or magic marker -simple maze drawn on fingerpaint paper -paths to follow with roll-on deodorant bottle "paintbrush" -dried glue or yarn and glue paths for rubbings -strips of paper, felt, or yarn for children to create own alternate routes
WOODWORKING CENTER	-"set" nails on piece of plywood in different rows that come together at same endpoint -pieces of telephone wire leading to an endpoint; with spools or bead to travel over the wire -"Build-a-pipeline"
BLOCKS CENTER	-roadway mat and cars -masking tape roads that interconnect -Fisher Price Garage -car garage with various tape roads leading to it -train track and train station -roads drawn on oilcloth -bowling game with one set of pins and more than one lane -bean bag toss with more than one throwing spot -"fences" made with different types of unit blocks

QUIET CENTER

- Storybook City with added masking tape sidewalks
- Rolling Marble Maze
- lacing cards (teacher-made)
- simple pinball game
- gameboard with different paths to "win" space
- sorting box

LISTENING CENTER

- rig a hanging bell so that it will be rung when any one of several strings are pulled
- movement records and several movement lanes leading back to the Center
- put bell inside "feely box" with more than one opening

WRITING CENTER

- simple mazes
- tracing patterns which include more than one way to get from one point to the other
- Etch-a-sketch
- pendulum writing

SCIENCE CENTER

- magnetic Maze
- marble maze
- blow up balloons with footpump
- wire, battery, switch, and bell
- bubble blowing through various lengths and types of straws and tubing
- "animal hunt" with tracks leading to hidden animal
- ant farm

HOUSE CENTER	-"food hunt" with footprints leading to hidden food item -large box "house" with two doors -open top doll house
SAND/WATER CENTER	-plastic plumbing pipes and joints -"Crazy Straws" -tubes/hose starting at water source and following a different path on different days -funnel with "y-joint" leading to two pieces of tubing -"Aqualab" -"Pipe Put Togethers" -sand on Lazy Susan with object attached at one point to serve as endpoint
GENERAL	-obstacle course with options -footracks for different ways to get from center to center -attach rope from one endpoint to another but following different routes -tunnel

Logico-mathematical Knowledge
SPATIAL RELATIONS
EUCLIDEAN AND PROJECTIVE

(1) Opportunities to explore the way objects fit together

Note: The materials listed here can be joined together. Materials that do not fit together should also be provided.

ART CENTER

- -magic markers and caps
- -jars and lids (variety)
- -macaroni and string
- -pipe cleaners
- -stencils and their insets
- -tape and dispenser

WOODWORKING CENTER

- -nuts and bolts
- -vise and wood
- -screwdriver and screw board
- -lockboard
- -boltblock and wrench
- -Bolt Tile Construction Set
- -wooden spools and dowel rods
- -Skill Sticks

BLOCKS CENTER

- -Bristle Blocks
- -Legos
- -Rig-a-jigs
- -Lincoln Logs
- -Snap rings
- -Snap-lock beads
- -Batistos
- -Fisher Price play sets

-Snap blocks
-Building Clowns
-Nesting Soldiers

QUIET CENTER

-pegs and pebgoards
-shape sorters
-puzzles
-viewmaster and reels
-Barrel of Monkeys
-Octagons
-Tupperware blocks
-color clips
-Unifix blocks
-Nesting barrels
-geoboards

LISTENING CENTER

-recordplayer and records
-taperecorder and cassettes
-Color bell
-Language master and cards

WRITING CENTER

-paper clips
-notebook binder and paper
-wooden alphabet insets
-click-pen taken apart
-magic markers and caps
-Puppet chalk holder
-school chalkholder
-notebook paper and looseleaf rings
-pens and caps
-staples and stapler

SCIENCE CENTER

- balsa wood model airplanes
- foot airpump and balloons
- Lots o' Gears
- electric bell and battery
- pulley

HOUSE CENTER

- pots and lids
- bottles and caps
- plastic bowls and lids
- dressing boards
- keys and locks
- feet and shoes
- hands and gloves/mittens
- plastic eggs
- clothespins and rope, boxes
- keys and keyring

SAND/WATER CENTER

- plastic eggs
- Pipe Put Togethers
- tubes and corks
- measuring cups that stack
- wet sand and molds
- wet sand and pegs/straws
- water foam blocks
- "boats" (toothpick, foam, paper)
- drinking straws and styrofoam balls

(2) Opportunities to rearrange and reshape materials

ART CENTER	-pipe cleaners -tape, stapler, glue, paper clips, rubber bands, scissors, hole punch -yarn -paper -clay and playdough -collage materials -cookie cutters -paper folding: airplane, animals, hat, boat
WOODWORKING CENTER	-nails, screws -wood scraps -styrofoam -telephone wire -wooden spools
BLOCKS CENTER	-Lincoln Logs -unit blocks -Legos -crawl-through tunnel -table top blocks -rope and/or plastic tubing -Tinker Toys

QUIET CENTER	-Storybook City -Play Tiles -colored one-inch cubes -flannelboard sets -beads and string
LISTENING CENTER	-music for stretching -scarves and ribbons -set of hand bells
WRITING CENTER	-magnetic letters -Etch-a-sketch -Magna-doodle -chalkboard -toothpicks -salt writing box
SCIENCE CENTER	-simple machines -balance, objects, clay -kaleidoscope -color paddles or goggles -Magnetic Builder -Magic Sand -Lego Machine Builder
HOUSE CENTER	-doll house and furniture -towels, sheets, and blankets for folding

-clock

-child-sized stove, refrigerator, sink, table, chair, washing machine, dryer, TV

SAND/WATER CENTER

-plastic bottles with bottoms cut off

-wet sand and molds

-wet sand and spoons/scoops/rakes/trowels

-dry sand, buried objects, and rake/trowel/scoop

-balsa, styrofoam, toothpicks, drinking straws, and paper

(3) Opportunities to observe different viewpoints from different positions in space

Note: The listing here highlights the position of the materials or of the child.

ART CENTER

- -tape finished art projects on the ceiling or hang on clips hanging by string from the ceiling
- -use plexiglass with water-based markers or paint. the plexiglass may be hung vertically or horizontally, wedged between two tables in a vertical position, stretched vertically between two chairs
- -tape paper to the side of the table as well as the top
- -tape paper under the table
- -partially cut off the legs of the table
- -cover the floor with paper to be used for drawing
- -hang long piece of paper along wall

WOODWORKING CENTER

- -car mechanic works on the underside of tables (cars)
- -mount 2x4 on wall so sanding, drilling, nailing, and screwing will be done standing upright
- -remove workbench table to permit construction with wood, nails, glue, spools, and foam fillers on the floor

BLOCKS CENTER

- put road mat or taped roads on piece of plywood set up on a table or hang from hooks on a wall
- unit blocks on a table or elevated planks
- "Giant" Tinkertoys or interconnecting blocks
- hang "accessories" (e.g. animals, vehicles) from above
- set up mechanics garage and use scooter to go underneath
- hang bean bag toss target above children's heads

QUIET CENTER

- remove table and chairs if usually used in this center
- Tic-Tac-Toe Tower game
- viewmaster and reels
- giant pegboard in vertical position
- Lego building plates taped to wall

LISTENING CENTER

- hang rhythm instruments at various heights from ceiling
- put music source (radio, record player, etc.) under a table, add carpet squares or pillows to encourage being under the table
- put music source (radio, record player, etc) above children's heads
- tape record directions and music for moving at different levels

WRITING CENTER

- lap writing boards or clip boards

-attach paper to walls (or other surface to achieve vertical position)

-hang writing instruments from above

-attach writing instrument to hat or belt

-duplicate patterns for tracing on vertical and horizontal chalkboards

SCIENCE CENTER

-tape stars, moon, sun, cloud on the ceiling

-pulleys with buckets, plexiglass platforms, box

-periscope

-put object inside plastic hamster exercise ball

-put mirrors in unusual positions for looking at objects

-leaf rubbings

HOUSE CENTER

-mirrors: full length, hand, table-top

-hang food and dishes from ceiling

-hang the baby bed from the ceiling

-remove the table and put the tablecloth and dishes on the floor

-table-top ironing board put on floor

-puppet stage

-"Brownie" camera (need to look down into)

SAND/WATER CENTER

-underwater masks/goggles

-tape laminated (or otherwise water resistant) pictures under clear plastic water tub

-change elevation of water and sand tables

GENERAL	-turn pictures upside down, on their side, or at an angle
	-turn pieces of furniture upside down
	-Rubbermaid Lazy Susan's
	-balance beam
	-scooter boards
	-slide
	-teeter totter
	-parachute play
	-snap walls

(4) Opportunities to experience one's own body

Note: The materials listed here primarily highlight "unusual uses" of body parts. The "usual" uses should also be addressed.

ART
CENTER

- painting with feet
- fingerpainting
- body painting with water colors, shaving cream or body paints (cold cream and dry tempera)
- hand prints
- feet prints

WOODWORKING
CENTER

- plaster of paris hand prints
- golf tees, golf markers, wooden pegs, wire, tiny colored clothespins to be pushed into styrofoam
- hammer and nails
- saw and wood
- sandpaper and wood

BLOCKS
CENTER

- different sized boxes to get into
- hang a ball slightly higher than children so they need to jump
- crawl through tunnel
- tape lines for walking
- pull toys including wagon
- Snap Walls
- milk crates
- giant blocks

QUIET CENTER

- body movement cards
- body position cards
- knobbed puzzles for fingers or toes
- Twister game
- hand puppets
- body puppets

LISTENING CENTER

- blindfolds
- "mouth" rhythm instruments
- "hand" fhythm instruments
- clapping songs
- foot stamping or marching songs
- recorded directions for open-ended movement problems
- "Squeeze" noisemakers
- guitar
- fingerplay puppet

WRITING CENTER

- stamps, stickers, and envelopes for licking
- writing with feet
- smelly markers
- writing instrument taped to hat (use head movements for writing)
- salt writing bos)

SCIENCE CENTER

- stethoscope
- feely boxes for hands
- feely trays for feet
- binoculars
- magnifiers

HOUSE CENTER

- -dress up
- -make-up
- -curlers
- -nail polish
- -mirror
- -pretend food

SAND/WATER CENTER

- -place different sensory items in the sandbox for walking through
- -fill the water table by carrying pails of water from a nearby source
- -fill the sand table by carrying pails (or whatever) of sand from nearby source (box of sand originally removed from sandbox)
- -shovels, rakes and sand

GENERAL

- -old mattress for jumping, somersaulting, etc.
- -obstacle course
- -taped lines for walking around the room
- -roller skates
- -Chinese jump rope
- -tin can stilts
- -Giant Tumble Balls
- -Pathway Sets
- -activity hoops
- -balance board
- -riding toys
- -balls
- -parachutes

(5) Opportunities to actively explore shapes

Note: These materials have fixed, distinguishable shapes, regular or irregular.

ART CENTER

- etch junk objects into clay, playdough, or paint spread thin on a tray
- cookie cutters with clay or playdough
- shapes pre-drawn on paper can be incorporated into pictures
- shape cookie cutters
- tagboard shape stencils for painting over at an easel
- yarn and cut-out construction paper shapes with hole punched in center
- shape clay mallets
- gummed shapes

WOODWORKING CENTER

- die cut plywood shapes
- wooden spools and wheels
- ceramic tiles (square, round, leaf, heart)
- wood chunks, knobs, arcs, blocks and squiggles

BLOCKS CENTER

- shape bean bags
- shape mats
- shape roads
- traffic signs
- Pathway Set
- unit blocks
- Storybook City

-People Builders
-snap blocks
-taped shapes on floor

QUIET CENTER

-flannel shapes
-"beads" from Peabody Early Experience Kit
-shape puzzles
-attribute blocks
-shape sorter
-shaped books
-table top colored wooden blocks
-Fit-a-Slot Builder
-Magnetic Form Board
-parquetry blocks and patterns

LISTENING CENTER

-triangles
-wrist bells
-sand blocks
-tambourine
-drum

WRITING CENTER

-plastic shape templates
-alphabet letter stencils
-shape rubber stamps
-wooden inset letters

SCIENCE CENTER	-feely box with objects distinguishable by shape -magnets -simple machines
HOUSE CENTER	-food pictures from the American National Dairy Council -food shapes cut out from construction paper, e.g. round donut, square bread -plastic shape plates -wooden play groceries
SAND/WATER CENTER	-cookie cutters and wet sand -etch with junk objects on sand thinly spread on a tray -alphabet sand molds -geometric sand molds

(1) Opportunities to explore different rates of speed.

Note: The materials listed provide a starting point for the teacher to imitate the child's rate of speed and then introduce a change.

ART CENTER	-paper airplanes -Rubbermaid Lazy Susan -stick dowel through ends of oatmeal box. support the ends of the dowels so the box will spin freely, tape paper around the box and spin it while painting or coloring. -"paint pencil" (IV bag and tube with regulator switch)
WOODWORKING CENTER	-hand drill -saw -sand paper -gear board
BLOCKS CENTER	-animal figures -people figures -transportation items -fill plastic hamster exercise ball with different amounts of tennis balls -bowl with different types of balls -make down hill ramp for cars, one lane covered with paper,

one with cardboard tubing from hangers

-things that roll, e.g, balls, spools, beads, cans, stacking rings

QUIET CENTER

-spinning top

-spinner games

-Racer Roller

-Build and Roll Raceway

-marbles

LISTENING CENTER

-cassette tapes of music at different tempos

-record of music at different tempos

-riding horse

-props for fingerplays/songs

-rhythm instruments

-metronome

-musical toys

-musical pull toys

-Simon

WRITING CENTER

-magnetic mazes

-pencil sharpener

-Roll 'N Write Letter Boards

SCIENCE CENTER

-plastic exercise ball for hamster

-spinning top

-pinwheels

-pulley

-inclined plane

-wheel and axle

-ant farm

-hamster on exercise wheel

-fish in aquarium

-flashlight

HOUSE CENTER

-egg beater

-wisk

-make popcorn

-rolling pin

-shopping cart

-baby buggy

-baby cradle

-rocking chair

SAND/WATER CENTER

-water pump

-suspend a plastic squeeze bottle upside down from the ceiling over a large piece of bulletin board paper or a very large tray. provide sand to fill the bottle with.

-plug part of the flow hole of different sized funnels

-"water pencil" (bag and IV tube with regular switch)

-punch different sized holes in sides and bottoms of plastic containers

-basters, and eyedroppers

-sand mill

-colanders/strainers with different sized openings

(2) Opportunities to experience a variety of marked time intervals.

Note: The role of the adult in introducing the markers for the time intervals that the child is experiencing is key.

ART
CENTER

- art experiences which require different drying periods, e.g. plaster of paris, fingerpaint, painting with water, time the drying period
- scribble to the music (start and stop when music does)
- provide timers to use with turn-taking at the easel
- provide green/go circles and red/stop circles on various lengths of paper

WOODWORKING
CENTER

- timer for using materials
- pictured rules for taking turns using saw or drill: start picture shows wood intact and stop picture shows wood cut or with hole
- required use of safety goggles will mark beginning and end of activities in this center

BLOCKS
CENTER

- timer for car races
- materials for "Red Light, Green Light"
- start and finish lines for races of differing durations
- trundle wheel

QUIET CENTER	-"Perfection" -books with pictures about field trips -clock face (doesn't run, movable hands) -books to read start to finish -seasons flannelboard set -games with egg timer -filmstrips (have beginning and end) -speech target game boards
LISTENING CENTER	-clock radio -set up for musical chairs -records -audio-tapes -tape recorded directions for "Simon Says...start clapping. Simon Says...stop clapping"
WRITING CENTER	-calendar with daily picture of special events -tracing lines of different lengths -notebook of daily "School News" dittoes -use timer for determining turns with typewriter
SCIENCE CENTER	-weather "calendar" -seasons "calendar" -sand timers of various sizes; can be made by taping together

	openings of two clear containers -"calendar" to mark seed growth
HOUSE CENTER	-alarm clock -watch -cooking experiences with different "cooking" times, e.g. cookies, cake -raise and lower window shades or turn lights on and off to mark day and night in dramatic play. A day/night picture dial could also be used
SAND/WATER CENTER	-pouring containers -funnels of different sizes -IV bag and tube with thumb screw regulator -store water in camping jug
GENERAL	-daily schedule chart -bell for "time to stop" -duration speech targets -planning board -start and finish lines

(3) Opportunities to coordinate past, present and future.

ART CENTER	-displayed past art projects -materials related to holiday projects -materials related to seasonal projects -projects that might take more than one day -task cards for art projects
WOODWORKING CENTER	-photographs of past or present constructions -constructions which might be continued to a second day -task cards for construction projects
QUIET CENTER	-field trip story books -books about holidays and seasons -Memory lotto game -sequence pictures -pattern cards for parquetry blocks
LISTENING CENTER	-record and play back tapes or cassette recorder -holiday songs -seasonal songs -Simon

WRITING CENTER	-past, present, and future calendars -holiday greeting cards -"make a book" about a field trip -experience chart stories -"journals" -displayed past writing activities
SCIENCE CENTER	-task cards for "experiements" -"experiment" chart stories -seasonal calendar
HOUSE CENTER	-holiday paper products, e.g. napkins, paper plates -task cards for cooking experiences -chart stories about previous cooking experiences
SAND/WATER CENTER	-snow in water table -leaves in sand table -wet sand left to dry out
GENERAL	-daily schedule -holiday bulletin boards -seasonal bulletin boards -anticipate and recall visitors -not "cleaning up" but leaving room as is for next day

(4) Opportunities to recognize cause-and-effect while participating in a sequenced event.

ART CENTER	-pasting activity with directions provided -gluing activities with directions provided -directions for folding paper activities -cutting activities with directions provided -gummed paper with directions
WOODWORKING CENTER	-hammer and nails with directions provided -gluing activity with directions provided -drill with directions provided
BLOCKS CENTER	-pull toys -"ramps" and cars with illustrations provided -rope, pulley and basket
QUIET CENTER	-sequenced picture cards -wind-up toys -spin top

LISTENING CENTER	-cassette tape for following oral directions -musical jack-in-the-box -language master with directions for recording and listening -tape recorder with directions for recording and listening -See 'N Say with directions -tuning fork and water -electrical bell circuit
WRITING CENTER	-magic slates -rub off letter stencils -water crayons or pencils
SCIENCE CENTER	-electrical circuit bell with directions provided -pulley (table-sized) -balance -scratch and sniff stickers with directions provided -baking soda and vinegar with directions -ammonia paper -"Solar Encounters", printmaking with light
HOUSE CENTER	-cooking experiences, e.g. pop-corn -water, tub, soap, clothes to be washed and dried, and clothesline -props for role playing

SAND/WATER CENTER	-food coloring and water with directions provided -water, sand, and molds with directions provided -water, detergent, and tubing with directions provided

(5) Opportunities to participate in a sequenced event not involving cause-and-effect.

ART CENTER	-directions for cut and paste activity -directions for salt-flour dough -directions for plaster of paris -directions for paper mache
WOODWORKING CENTER	-directions for simple project such as a boat -directions for order of using tools, e.g. (1) saw; (2) hammer; (3) paint
BLOCKS CENTER	-directions for a block construction -props for re-enacting trip to farm or fire station -props for sociodramatic play related to community helpers
QUIET CENTER	-picture books -filmstrips -games with spinner, cards, playing pieces, and gameboard
LISTENING CENTER	-oral directions in sequence on cassette tape

	-directions for making a tambourine -directions for making "shaker" tubes or boxes -taped recorded books -props for finger plays -directions for playing order of instruments
WRITING CENTER	-experience chart stories -sentence strips for experience stories -step-by-step directions for "sending a letter" -tracings patterns for words -directions for using a typewriter
SCIENCE CENTER	-grow marigold seeds in dirt -directions for simple experiments, e.g. celery and food coloring, mixing colors, vinegar and baking soda -crayon rubbings -hatch chicks in incubator
HOUSE CENTER	-packing suitcase -directions for making kool-aid -props for sociodramatic play
SAND/WATER CENTER	-directions for bubble blowing activity -directions for making boats -props for re-enacting baking or cooking activity

(6) Opportunities to reconstruct the temporal order of three to five parts of an event.

Note: These activities differ from those of the previous two objectives in that the child uses the representations *after* the activity.

ART CENTER	-photographs of child at key points in three to five part activity, e.g. mixing salt-flour dough, rolling out the dough, cutting the dough with a cookie cutter, letting the dough dry, painting the dried shape -long pieces of roll paper marked into sections -photographs from field trips
WOODWORKING CENTER	-photographs of children at key points in three to five part activity
BLOCKS CENTER	-materials for role playing field trip to farm, zoo, airport, fire station, police station, gas station
QUIET CENTER	-flannelboard story kit (read book version prior to) -commercial sequence pictures of daily events -photographs of children involved in daily routine activities -predict outcomes: put objects down on opaque tube and guess what will come out first, next, etc.

LISTENING CENTER

- "Simon"
- record (tape or language master) descriptions using experience chart story or pictures as stimuli
- props for songs that recreate familiar activities, e.g. "This is the Way" "What does a fireman do?"

WRITING CENTER

- sentence strips from experience story
- materials for role playing trip to Post Office, school office
- chart paper
- blank sentence strips
- materials to "make a book" about a particular experience

SCIENCE CENTER

- pictures or photographs from experiements such as growing seeds or hatching chicks

HOUSE CENTER

- materials for role playing trip to hospital, restaurant, hair salon, bakery, clothing store, grocery store
- draw pictures for "TV" (box with roll of paper feeding over two dowel rods)
- materials to re-enact cooking or baking experience

SAND/WATER
CENTER

- materials for role playing trip to beach, park, garden
- materials to re-enact cooking or baking experience (posted picture story would be helpful reference)

Logico-mathematical Knowledge
NUMBER

(1) Opportunities to compare sets of quantities.

Note: The materials to be provided must include not only the quantity material, e.g. counters, but also different ways of containing that quantity, e.g. tubs, boxes, jars, trays.

ART CENTER

- paint and different-sized storage containers
- playdough and different-sized storage containers
- paintbrushes and paint jars
- cut-out shapes and shape outlines on paper
- collage "junk" and delineated area on paper/cardboard
- ink pads and stamps on paper strips of different lengths
- colored sand and different-sized surfaces
- glue in squeeze bottles, nail-polish bottles, roll-on bottles, and cups

WOODWORKING CENTER

- nails and wooden spools
- screws and starter holes
- bolts and nuts
- foam scraps and different-sized surfaces
- popsicle sticks

BLOCKS CENTER

- animals and cages
- cars and garages
- unit blocks in patterns or constructions to copy

	-"parent" animals and "baby" animals -hoola hoops and hoop holder blocks -Peg People Transportation Fleet
QUIET CENTER	-Unifix cubes -buttons and clear jars -beads and string -colored one-inch-cubes and cans -Teddy Bear Counters and colored containers -pegboards and pegs -sorting tray and groups of objects -Mosaic Peg Pictures
LISTENING CENTER	-props for "quantity" songs -taped grouped beats of rhythm sticks or tambourine or cymbals, etc. -fingerplay puppets
WRITING CENTER	-ink pads, rubber stamps, and strips of paper -cut out shapes/letters and envelopes -writing instruments and different sized storage containers -file folders and papers
SCIENCE CENTER	-collection materials such as rocks, shells, leaves, nuts

- balance and objects
- Lite Brite
- magnets (different types) and iron filings

HOUSE CENTER

- shoes
- cups and saucers
- dishes and eating utensils
- clothespins and face cloths with clothesline
- pots and lids
- shoes and shoe rack
- plastic eggs and egg cartons

SAND/WATER CENTER

- dry sand
- wet sand
- water
- measuring cups (clear preferably)
- measuring spoons
- different sized containers (bowls, pails)
- balance
- different-sized eyedroppers and basters
- different-sized plastic bottles

(2) Opportunities to add and remove objects from a set.

Note: The adult is encouraged to set up pre-formed "sets" and to also have a surplus supply available.

ART CENTER

-paint in small containers
-cut out shapes
-collage "junk"
-playdough
-paper chains

WOODWORKING CENTER

-nails and wooden spools
-nuts and bolts
-popsicle sticks
-foam scraps

BLOCKS CENTER

-plastic animals
-unit blocks
-cars
-snap blocks

QUIET CENTER

-Unifix cubes
-buttons and containers
-beads and string
-one-inch cubes and containers
-counters
-sorting tray and objects
-"Hats Off" game
-pegboards and pegs

LISTENING CENTER	-taped groups of beats made by a rhythm instrument -hand bells -take-apart xylophone
WRITING CENTER	-cut out shapes/letters -envelopes -strips of paper stamped with rubber stamp, scissors, rubber stamp, and ink pad -file folders and papers
SCIENCE CENTER	-balance and objects -collection materials such as shells, leaves, nuts, rocks -Lite Brite -magnets and iron filings
HOUSE CENTER	-dishes -pans -clothespins -poker chips -shoes
SAND/WATER CENTER	-dry sand -wet sand -water -measuring cups (clear preferably) -measuring spoons

-containers, e.g. bowls, pails
-balance
-eyedroppers and basters

(3) Opportunities to explore reversibility.

Note: With each material is listed one possible way of presenting it. In parentheses are one or two possible ways it could be rearranged, reshaped, or recolored. Do not have surplus materials available as this could change the quantity.

ART
CENTER

- playdough in a ball (flattened, rolled)
- paint in small container (spread on paper, different color added)
- paper with 10 shape outlines and supply of cut out shapes (change color)
- five squares of wallpaper, and a strip of paper and crayons, (change color, order)
- pipecleaner and beads (change, order, color, shape)

WOODWORKING
CENTER

- 20 popsicle sticks, crayons, and glue (color, arrangement)
- five wooden spools, magic markers and wire. (color change, re-order)
- rope, five cardboard tubes, and crayons (change order, color)

BLOCKS
CENTER

- ten units blocks stacked (put in row, build enclosure)
- Snap blocks (different arrangements)
- ten train track pieces (change order, change shape)
- colored one-inch cubes and pattern cards for a given number (change color, change order, change shape)

QUIET CENTER	-ten beads on a string (re-order, make a necklace) -pegs and pegboard (color, pattern) -Tile Mosaic (color, pattern)
LISTENING CENTER	-props for number songs (change characters, change order) -rhythm pattern cards (change instruments) -hand bells (change order)
WRITING CENTER	-envelopes affixed to wall and something to put in each, e.g. index card, greeting card, cut-out alphabet letter (change order, change material) -paper strips marked off into five sections and stamp with inkpads (change order, change color, change content) -pencil holder (change color, change order)
SCIENCE CENTER	-measuring cup and separate containers of "texture" materials, e.g. rice, noodles, cotton ball, pebbles (change content) -Lite Brite pattern cards (change color, change pattern) -weekly weather chart (change temperature, change sky condition) -iron filings (change shape) -sorting tray and nature collection (change content, change order)

HOUSE CENTER	-shoes and shoe rack (change order) -cups and hooks (change order, change color, change content) -egg carton with separate containers for poker chips, marbles, plastic eggs, bottle caps (change order, change content)
SAND/WATER CENTER	-measuring cup and separate containers of wet sand, dry sand, water (change content) -eyedropper, water, and food coloring (change color) -small quantity of wet sand and five plastic molds or containers of comparable size (re-shape)

Logico-mathematical Knowledge
NUMBER

(4) Opportunities to explore equivalence.

Note: Materials are listed in pairs which will hopefully provoke a one-to-one matching. The members of the pair should be provided in equal quantity, for example - shoes (10) and socks (10).

ART CENTER	-paintbrushes and paint containers
	-magic markers and caps affixed in plaster of paris
	-scissors and scissors rack
	-collage: paste one thing inside each circle drawn on paper
	-loop loom
WOODWORKING CENTER	-nails and wooden spools
	-nuts and bolts
	-silhouette of each tool for clean up
	-toy pounding bench
BLOCKS CENTER	-colored one-inch cubes and pattern cards
	-cars and garages
	-Fisher Price cars and people
	-toy animals and cages
	-toy people and beds (unit blocks)
	-Lego people and bikes
	-Peg People Transportation
QUIET CENTER	-single inset puzzles

-pegboard and pegs
-Lotto games
-flannelboard cut-out shapes
-Chinese checkerboard and marbles
-Frame Mosaic

LISTENING CENTER

-set up for Musical Chairs
-fingerplay puppets
-records and record track
-piano/organ and hand
-pegs and instruments

WRITING CENTER

-wooden inset alphabet letters
-envelopes and cards
-"make-a-book": paste or draw just one picture on each page
-E-Z up clips for displaying finished work
-pencils and pencil erasers
-pens and caps

SCIENCE CENTER

-Lite Brite
-nature lotto
-animal single inset puzzles
-animal lotto

HOUSE CENTER

-shoes and socks
-hooks and cups
-pots and lids

-cups and saucers

-bottles and caps

-paper ice cream cones and cotton ball ice cream scoops

-dollhouse chairs and dolls

-plastic egg halves

-dressing frames: button, snap, buckle

SAND/WATER CENTER

-plastic bowls and lids

-plastic squirt bottles and caps

-funnels and plastic tubes

-boats and sails

(5) Opportunities for experience with the conventional number system.

ART CENTER

- cut out shapes to paste one under each numeral
- large "fill-in" numerals to paint or paste collage materials
- number cookie cutters and clay
- clay and plastic number eggs

WOODWORKING CENTER

- graph use of tools
- tally use of materials
- tape measure

BLOCKS CENTER

- tape measures and yard sticks
- addresses for houses built
- numbered bowling pins
- numbered cars

QUIET CENTER

- Numberite
- More or Less cards
- playing cards
- flannel numerals
- number puzzles
- write numerals on sides of one-inch cubes to use as "dice" in games
- Number Worm

	-magnetic numbers -wooden number insets
LISTENING CENTER	-prop charts for songs -number song records -cassette tapes with number songs
WRITING CENTER	-calendar -tracing patterns -inkpads and numerical rubber stamps -cut-out numerals -mailboxes with addresses -numeral posters -typewriter -adding machine -calculator -postage stamps -numeral templates
SCIENCE CENTER	-weather graph -scales -measuring tapes -measure growth of plants -height comparison chart -thermometer
HOUSE CENTER	-addresses posted

	-felt numerals sewn on washcloths to hang on clothesline -telephone -cash register -money -clocks -covers for golf clubs to hang on clothesline
SAND/WATER CENTER	-tape numerals to floor around sand box or water table (cover with contact-paper to preserve) -measuring cups -wet sand and plastic numerals -foam rubber numerals

(6) Opportunities to explore parts of a whole (fractions).

ART CENTER	-color wheel provide outlines for fractions of a whole to fill in -rainbow patterned corrugated paper -paste precut parts to make whole -water color sets
WOODWORKING CENTER	-die cut plywood parts -styrofoam fractional pieces -box with compartments
BLOCKS CENTER	-snap wall -unit block supplemental shapes -Sponge Ball
QUIET CENTER	-fraction puzzles -fraction flannel board pieces -crepe fraction pieces and pattern cards -games with spinners -"Fit-a-fraction-circles" -"Fraction Disco"
SCIENCE CENTER	-weather graph -scales

	-measuring tapes -measure growth of plants -height comparison chart -thermometer
HOUSE CENTER	-addresses posted -felt numerals sewn on washcloths to hang on clothesline -telephone -cash register -money -clocks -covers for golf clubs to hang on clothesline
SAND/WATER CENTER	-tape numerals to floor around sand box or water table (cover with contact-paper to preserve) -measuring cups -wet sand and plastic numerals -foam rubber numerals -puzzle tiles and patterns -tangrams -Cuisenaire Rods -Unifax cubes and grids
LISTENING CENTER	-Color Bell -Simon -piano
WRITING CENTER	-fraction rubber stamps

	-fraction templates -calendar -graph paper -desk drawer organizer -desk top organizer
SCIENCE CENTER	-Flower Design Match -Toadstool Match -measuring tape
HOUSE CENTER	-Fractional Fruits -cooking activities -styrofoam pre-cut "pies" -plastic eggs -"pizza" -clock -school lunch trays -paper plates with divisions -"One Dozen Eggs"
SAND/WATER CENTER	-measuring cups -measuring spoons -egg carton -litre cube -graduated beakers

(1) Opportunities to explore the "permanence" of objects.

Notes: Listed are some ways of setting up materials to be recognized whether partially visible or completely absent.

ART CENTER

- hide objects in center of lump of playdough
- markers (and crayons) in plain box with end cut off so only ends are showing
- leave sample of paint or clay imprints out on table. put objects used in box on shelf
- store paintbrushes in tall can so that only tips are showing
- store stapler in box labelled with staples (taped on)
- remove any material that would regularly be found in the Art Center, e.g. chairs

WOODWORKING CENTER

- remove any material that would regularly be found in this center, e.g. table or workbench
- store current tool in container so only top or bottom half is showing
- hide frequently used object under a scarf and a box

BLOCKS CENTER

- send objects through cardboard tubes
- store cars in solid box with

wheel taped to lid

-store airplanes in solid box with propeller taped to lid

-store people figures in solid box with piece of clothing taped to lid

-store people figures in solid box with piece of clothing taped to lid

-take-apart vehicle unassembled

-Oscar the Grouch pull toy

-airplane with wheel missing

QUIET CENTER

-"mystery bags": place object in bag, on outside tape picture of a part of that object (or the actual part), e.g. car-tire, pot-handle

-send objects through colored plastic tubes

-halves-wholes cards

-puzzles with piece missing

-"What part is missing?" cards

-complete the picture lotto

-part-whole dominoes

-puppets and puppet stage

LISTENING CENTER

-Colored Bell unassembled

-guitar in carrying case

-store each instrument in its own drawstring bag

-store instruments on shelves covered with partial screen

-bell with handle missing

WRITING CENTER	-store alphabet cut-outs in individual envelopes with part of letter showing -remove any material that would regularly be found in this center, e.g. pencils -unassembled alphabet puzzle -put tape over half of each rubber stamp
SCIENCE CENTER	-fill box(es) with sand, styrofoam pieces, wood chips, smooth stones, stone chips, peanut shells, dirt, or leaves and hide an object in the box -shadows, preferably with screen/ sheet between object and observer -feely box -pictures of nature objects, e.g. animals, with template overlay, such as found in the Peabody Early Experience Kit -hamster in cage with bedding -turtle -fish in aquarium with lighthouse
HOUSE CENTER	-place object on lazy susan and spin -plastic eggs for hiding objects -plastic bowls with lids for hiding objects -label dresser drawer for shirts with a button, for pants with a zipper, and for shoes with a shoelace -Playskool Doll House

SAND/WATER CENTER	-tape large picture of single object to bottom of sandbox so parts are revealed as children dig -bury small objects in sand with part showing through -plastic bowls with lids for hiding objects -opaque bottles -opaque pipe plumbing pieces

(2) Opportunities to explore the "constancy" of objects.

Note: Listed are some different contexts, different positions in space, different states, or different sensory highlights for presenting materials.

ART CENTER

-playdough: scented, colored, dried out, rolled out over surface of table, small balls in shallow bowl

-paint: with brushes, cars, sponges, fingers, feet, feathers, blocks

-make imprints in clay with object, changing the orientation

-paint: thick, watery, dry, scented, with rice added

-paper: dry, wet, folded, corrugated, coated, tissue, cardboard, wallpaper, newspaper

-puzzle pieces (from Quiet) available for tracing

-body painting with water colors. have mirrors (from House) available in center

-record player (from Listening) in center to evoke fast and slow coloring

-tape paper or floor or walls for drawing or painting

-fingerpaint on plexiglass (horizontal, vertical or angled), fingerpaint paper, Mess 'n Play Tray

-sock puppets

-use objects from nature collections for printing

WOODWORKING CENTER

-different types of nails

-nails with styrofoam, wood, plastic bottle caps

-different types of screws

- glue with wood scraps, foam filler pieces, spools, cardboard tubes
- toys from Blocks Center in need of repair
- mount board for hammering nails on the wall or on the floor
- hang tools upside down

BLOCKS CENTER

- trace and cut out from refrigerator box different perspectives of child (frontal, side, crawl, different arm positions)
- cans and boxes from House Center for building
- remove strings from pull toys
- blocks of different textures; Bristle Blocks, cardboard, plastic, foam, unit, cloth foam, Structo
- make available puppets from Quiet Center
- make available dramatic play props from House Center

QUIET CENTER

- match objects to tracings of different perspectives of those objects
- make available a set of blocks appropriate for table-top use, e.g., Legos, Bristle Blocks, Batiscos
- add "school-made" books to "published" book selection
- match objects to photographs of those objects at varying distances, in an out-of-the ordinary context, or from a different perspective

LISTENING CENTER

- -suspend rhythm instruments from above
- -play organ with sound turn off
- -"noisemakers" from other centers: two unit blocks, pot and spoon, hanging shells, wooden spoon and oatmeal box, bottle caps and cardboard, toilet paper rolls and beans or rice (cover ends)
- -taped environmental sounds with referent pictures
- -taped sounds of rhythy instruments with the instruments also available

WRITING CENTER

- -scented magic markers
- -tape magic marker to front of hat
- -salt writing boxes (or sand)
- -scented ink pads for rubber stamps
- -feet writing
- -make available books from Quiet Center
- -make available magazines from Art Center
- -tape down shape stencils in varying orientations

SCIENCE CENTER

- -Slinky
- -magnetic shavings pictures
- -shadows
- -feely boxes with familiar items from other centers
- -blindfolded taste-testing
- -smell jars
- -scale and familiar objects from other centers
- -tape nature pictures on the ceiling with referent pictures available at child's level

HOUSE
CENTER

-cooking experiences: applesauce, toast, banana spread, oatmeal

-rearrangement of child-sixed furniture

-cook playdough and send home in plastic lunch bags

-make available paper and pencil

-make available playdough for "cooking"

-make available blocks from Block Center

-hang clothes and utensils upside down

-remove the table but keep the chairs

SAND/WATER
CENTER

-sand: wet, colored, molded

-put "sand" toys in water table

-water: colored, warm, cool, snow, ice cubes

-make available waterproof familiar objects from other centers in the sand box

-water in clear containers, colored containers, flexible tubes, water pump, plumbing pipes, long narrow table, short deep table

-bury appropriate familiar objects from other centers in the sand box

(3) Opportunities to actively explore objects in the environment with all of the senses.

ART
CENTER

- lipstick prints on paper
- pudding fingerpainting
- shaving cream on plexiglass or shelf paper
- paint hands with rubber cement and touch things
- add texture to fingerpaint, e.g. rice
- peanut butter playdough
- clay
- scented playdough
- scented paint
- paper textures: wet, dry, wallpaper, corrugated, tissue, waxed, aluminum
- gummed paper
- colored multi-shape macaroni
- gummed stickers
- spices in shake-top jars to use with glue
- wheat-flour paste

WOODWORKING
CENTER

- graded sandpaper (touch)
- pounding metal, wood, plastic (listen)
- sawing styrofoam, woods (listen)
- sandpaper cedar wood or pine branches
- goggles
- steel file
- ceramic and floor tile pieces in different patterns

BLOCKS CENTER	-blocks: unit, hollow wooden, hollow plastic, cardboard, Bristle, cardboard, table-top-sized, foam -sound-making pull toys -sound-making transportation vehicles -ropes with varying textures -straw, sand pebbled, and peat moss flour spaces for animal play -Sound Blocks
QUIET CENTER	-viewmaster -tactile dominoes -tactile puzzles -Keys to Learning -Lite Brite -Multi-Shape Touch Boards -Perfection -Touch and Tell -Simon -buzzer board games -book tapes
LISTENING CENTER	-rhythm instruments -tape recorder: tape and listen -radio -head phones -language master -See 'N Say -Listening Lotto

WRITING CENTER

-scented magic markers
-scented ink pads for rubber stamps
-stamps
-envelopes (flavored)
-salt or sand writing boxes
-alphabet letters for finger tracing
-See 'N Say (alphabet, numbers)
-numerals for finger tracing

SCIENCE CENTER

-scented stickers
-tasting table with blindfold
-smell jars (poke holes in lids)
-sound shakers (cover ends of toilet paper rolls after filling with noodles, rice, sugar, pebbles)
-touch boards
-feely boxes
-feely socks
-binoculars
-pets
-plants
-nature collections
-stethoscope
-color paddles or goggles

HOUSE CENTER

-food cans (empty and clean)
-face make-up/paints
-cooking experiences
-perfume
-make-up
-air freshener (not aerosol)
-Talking Clock
-alarm clock

SAND/WATER CENTER	-bubble blowing -clear tubing, flexible and rigid -sand: wet, dry, and colored -water: colored, warm, cool, snow, ice cubes -replace sand in sand table with leaves, foam filler pieces -clear containers for sandbox

(4) Opportunities to actively explore objects using a variety of action patterns.

Note: Listed are some materials and the actions that can be performed on them. A given object may be listed in more than one center to illustrate the variety of actions.

ART
CENTER

-playdough: pound, pull, squeeze, cut, drop, mold

-yarn: cut, tie, lace, glue

-cotton balls: pull, blow, rub

-paper: cut, tear, fold, blow, punch, roll

-pipe cleaners: twist, bend, cut

-paper bag: cut, tear, color

-box: paint

-wooden spools: print

-sponge: print, wash

-macaroni: glue, paint, string

-gummed tape: cut, lick

WOODWORKING
CENTER

-wood: cut, pound, sand

-telephone wire: twist, bend, cut

-hammer: pound, pull, twist, bend

-foam filler pieces: cut, break, twist, pound, squeeze

-wooden spools: nail, glue, string

-milk jug tops: glue, nail

BLOCKS CENTER

-cardboard tubes: roll, stack

-ball: bounce, throw, roll, kick

-blocks: stack, push, drop, lay end-to-end

-transportation items: push, pull, ride

-family figures: walk, run, sit

-box: pull, push, open, scoot in, crawl inside, stack, smash

-crate: sit, stand, pull, push

-wagon: push, pull, sit

QUIET CENTER

-puppets: talk, sing, dance, hide

-teddy bear counters: count

-nesting barrels: open, close, stack, roll

-snap lock beads: push, pull

LISTENING CENTER

-wind chimes: blow, hit

-tambourine: shake, hit

-rhythm sticks: rub, shake

-tone block: scratch, strike

-cardboard rolls: shake (fill with beans), blow (hummer), roll

-tape recorder: talk, listen

-language master: talk, listen

-record: listen, dance, march, skip, clap, sing

-take apart bell cart: pull, roll, shake

-pull xylophone: pull, strike

-Jack in the Ball: roll, push

WRITING CENTER

- chalkboard: write, wash, erase
- paper: write, staple, erase, tape, clip
- pencil: sharpen, write, erase
- wipe-off cards: write, erase
- chalk: write, break, rub, smear

SCIENCE CENTER

- playdough: weigh
- pets: feed, pet, drop, pinch, blow
- paper bag: blow, twist, pop
- comb: rub
- kaleidoscope: look, turn

HOUSE CENTER

- water: heat, freeze
- child sized appliances: wash, paint, open, push, close
- broom: sweep, ride
- paper bag: fill
- comb: comb
- macaroni: stir, pour
- milk jug tops: turn
- baby doll: wash, feed, dress, hug, kiss
- shopping cart: push, pull, fill

SAND/WATER CENTER

- water: pour, stir, splash
- sand: stir, pour, sift
- foam filler pieces: float, blow
- family figures: float
- bottles: fill, squeeze, float

-spoon: stir, dig, push, feed
-sponge: squeeze
-teddy bear counters: float, bury

Physical Knowledge
PROPERTIES

(5) Opportunities to explore objects in relation to each other.

ART CENTER

- direction cards and materials for making simple materials such as tempera or plaster of paris
- chalk and buttermilk
- scissors and paper
- attach standard easel paintbrush with a hat, belt, or other "holder"
- clay and toothpicks, popsicle sticks, foam filler pieces, pipe cleaners, drinking straws
- burlap, yarn, needle
- fingerpaint made from tempera and liquid starch
- sponge, water and different types of paper. Use with paint, chalk of crayons

WOODOWRKING CENTER

- gears board
- hammers, nails, wood
- screwdrivers and screws
- saw and wood or foam
- drill and wood
- sandpaper and wood

styrofoam and golf tees

BLOCKS CENTER

- bowling game
- interlocking or interconnecting blocks
- rope and crates or boxes
- rope and pulley with or without platform

- train and train track
- ring or bean bag toss
- the different sizes and shapes of a unit block set
- cord and vehicles that aren't usually 'pull toys'

QUIET
CENTER

- using tongs to move small sorting objects
- string and buttons, drinking straw pieces, spools, macaroni, beads
- Lite Brite
- viewmaster
- filmstrip and projector
- felt pieces and flannelboard

LISTENING
CENTER

- provide rhythm instruments in new combinations such as striking bells with a rhythm stick
- cassette tape and tape recorder
- record and record player
- drum and mallett
- tone block and stick
- triangle and striker

WRITING
CENTER

- paint pencils and water
- chalk and water
- chalk and chalkholder
- magnadoodle

- magic slates

SCIENCE CENTER

- plant seeds
- magnets and magnetic/non-magnetic objects
- provide in tightly-sealed, see-through containers; sand and water, oil and water, soap and water, pepper and water, sugar and water, baking soda and vinegar, flour and water. (Shake)
- provide direction cards and materials for simple experiments such as mixing baking soda and vinegar.
- provide opportunities to observe light and color: prisms, cellophane, window sun catchers, color goggles, food colored water in see-through bottles, see-through balloons.

HOUSE CENTER

- provide direction cards and materials for making simple snacks such as kool-aid or butter.
- cooking experiences which highlight kitchen tools: knife, spoon, whisk, beater.
- brush, comb, and wig

SAND/WATER CENTER

- water and dish soap
- water and food coloring
- water and miscellaneous materials (e.g. dishsoap, rice, sand) in small clear plastic pop bottles

-water and sand
-water and soft bath blocks
-wet sand and molds
-dry sand and sifter

(6) Opportunities to use objects for other than their obvious or intended purpose.

ART CENTER	-print with sponges, vegetables, string/yarn, spools -spray paint with spritzer bottle -paint with paper (put fingerpaint directly on table) -paper plate hats -paper bag Indian vests -paint with different types of brushes: tooth, nail, hair, vegetable -peanut butter playdough -paint with whipped Ivory Snow
WOODWORKING CENTER	-screws and butterknife -cut styrofoam with knife -pound with wood block -using tree stump as base for nails
BLOCKS CENTER	-bowling with tall cans -building with boxes pulling a box "wagon" -using single-inset puzzle pieces as characters in play

QUIET CENTER	-replace chairs with inverted milk crates -replace the table with legless ironing board propped uo on crates -using colored multi-shape noodles for sorting -using different types of beans for sorting
LISTENING CENTER	-styrofoam cup string "telephone" -spoon and pot as musical instrument -ruler and washboard as musical instrument -paper plate tambourine -coffee can or oatmeal carton drum -comb harmonica
WRITING CENTER	-write with charcoal -write with sticks in sand or salt -write with hat which has magic marker attached to it -write with lipstick -write with eyeliner -write with glue
SCIENCE CENTER	-sort nature collections -"weigh" objects by suspending from elastic bunjy cord

- crayon rubbings with nature objects
- listen to sound shakers made with noodles, rice, sugar, pebbles
- toilet paper roll binoculars

HOUSE CENTER

- tent made from chairs and blankets
- "cook" with poker chips, bottle caps, foam fillers, playdough, counters
- fort made from table laid on side
- paper cones and cotton balls used as ice cream cones

SAND/WATER CENTER

- inverted table used as sandbox
- cut off milk cartons used as scoops
- use cans with both ends cut off for making bubbles
- use tubes and funnels to blow bubbles
- plug hole of funnel with sponge and duct tape to use as a cup
- styrofoam fillers in water table
- use cookie press with wet sand

Physical Knowledge
ACTION PATTERNS

(1) Opportunities to explore body action patterns.

Materials: The materials listed here are limited to those which will develop and afford practice for basic skills or action patterns.

ART CENTER

-cut: paper and scissors
-color: crayons and paper
-paste: paste
-paint: paper, brush, wet tempera
-sprinkle: dyed rice
-fold: paper
-spread/smear: chocolate pudding
-draw: crayon
-flatten/push/prss: playdough
-bend: pipe cleaners
squeeze: playdough
-rub: crayon rubbings

WOODWORKING CENTER

-pound: toy hammer and pegs
-saw: child-sized saw and foam
-turn/twist: nuts and bolts
-bend: pipe cleaners
-sand: sandpaper block and wood

BLOCKS CENTER

-build: unit blocks
-pull: pull toys
-push: cars
-throw: balls

QYIET
CENTER

-lace: beads and string
-open: storage containers
-squeeze/pinch: clothespins
-pull: pop beads
turn: child-sized key and lock

LISTENING
CENTER

-squeeze: baby toy
-shake: hand bells
-dance: radio
clap: hands
beat: drum
turn: radio
pull: musical pull toys

WRITING
CENTER

-write: crayon
-rub: eraser
-push: rubber stamps
-lick: stickers

SCIENCE
CENTER

-see: binoculars (joined toilet paper rolls)
-feel: feely box
-near: head phones
-taste: tasting dishes
-smell: smelly stickers
-blow: party favors
-pull: simple pulley
-rub: rubbings of nature objects

HOUSE CENTER

-sweep: broom and poker chips
-stir: spoon
-wash: dish basin and dishes
-iron: iron and clothes
-eat/drink: dishes and utensils
-squeeze: bottles
-lace: beads and yarn necklaces

SAND/WATER CENTER

-pour: small pitchers
-scoop/dig: sand shovel
-splash: water and hands
-rake: hands and sand
-squeeze: sponge
-drip: pitcher

(2) Opportunities to further explore the uses of action patterns.

Materials: Listed are some action patterns and some materials which might evoke those patterns and their reverse.

ART CENTER

-paint: paint, water, glue, roller paints

-color: crayons, paint, chalk, markers

-paste: collage materials

-cut: scissors, paper, yarn, cloth

-glue: collage materials

-fold: paper airplanes, hats, boats

-sprinkle: glitter, egg shells, spices, colored sand, dry paint

-spread/smear: shaving soap, fingerpaint, soap flakes

-draw: pencil, crayon, chalk, stick

-flatten/push/press: clay, playdough

-squeeze: playdough, eyedroppers, tempera markers

WOODWORKING CENTER

-pound: nails, hammer, golf tees and styrofoam

-saw: wood, styrofoam, different saws

-turn/twist: screws, bolts

-sand: sandpaper, wood

-bend: wire, pipe cleaners

BLOCKS CENTER

-build: blocks (different types), cardboard tubes, boxes

-fix: transportation items

-connect: Legos, Bristle Blocks, Batistos

pull: pull toys, wagon, box with rope handles

-throw: bean bags, ring-toss, soft frisbee, nerf balls, Toss-Um game, Velcro ball darts

QUIET CENTER

-open: barrels, sorting box, Tupperware alphabet boxes

-turn: wind-up toys, games with timers, Gears-Go-Round

-lace: spools, sewing cards, giant easy-grip pegs, Bags of Buttons

LISTENING CENTER

-squeeze: baby toys

-turn: music box, jack-in-the-box. See 'N Say, Spin-a-Sound

-dance: costumes, scarves, records

-shake: tambourine, maracas, castanets, jingle clog, wrist bells, cluster bells

-beat: tambourine, castanet, triangle, tone block, tick-tock block

-clap: cymbals, sand blocks

-pull: See 'N Say

WRITING CENTER

-turn: etch sketch

-push: Spinner Scope, typewriter

-write: chalk, pencil, pen

-lick: envelopes, postage stamps

-rub: rub-off stencils, crayon rubbings over alphabet letters

SCIENCE CENTER

-feel: Touch dominoes, thicknss discs, Feel 'N Match Textures

-smell: smell jars, mixing experiments

-pull: magnets, different types of pulleys

-blow: balloons, windmills, cup-on-a-string, straws and lightweight objects

-rub: balloons on head or carpet, comb and tissue

-hear: doorbell, stethoscope, water glasses, tuning fork

-see: magnifying lenses, color paddles, periscope, kaleidoscope, microscope

HOUSE CENTER

-sweep: broom and finer items

-stir: different types of spoons, different items to be stirred

-wash: clothes, doll's hair, windows

-iron: paper, leaves

-eat/drink: food items

-squeeze: clothespins, bottles lemon, baster, sponge

-lace: shoes, vests, Lacing Basket

-push: vacuum, mop, stroller, cart, broom

-open: picnic basket, locks, can openers, cash register

-turn: telephone dial, oven knobs, sink faucets

SAND/WATER CENTER

-pour: sprinkler, bucket, tubes

-drip: colander, sprinkler, funnel

-scoop/dig: sifter, scoops, cut milk jugs

-level: hand, shovel, trowel, hoe

splash: waterpump, spinner or water wheel

-rake: rake, forks, plastic saw

-squeeze: sponge, baster, syringe

(3) Opportunities to explore the functional use of objects.

Note: The materials listed are the basics with which children should be familiar. These materials should be provided as is, without elaboration.

ART CENTER

- paint brushes
- pencils
- magic markers
- paper
- crayons
- stapler
- playdough
- paste
- glue

WOODWORKING CENTER

- hammer
- vise
- wood
- goggles
- nails

BLOCKS CENTER

- unit blocks
- interlocking blocks
- transportation items
- people figures
- rope
- boxes

QUIET CENTER	-puzzles -books -simple manipulatives
LISTENING CENTER	-rhythm instruments: drum, cymbals, rhythm sticks, maracas, hand bells -record player -tape recorder (listen only) -radio
WRITING CENTER	-paper -pencils -crayons -markers -stapler -chalk and chalkboard
SCIENCE CENTER	-plants -pets -weather charts
HOUSE CENTER	-child-sized furniture -child-sized dishes, cookware and utensils

	-baby dolls -clothing item -iron -broom -play food
SAND/WATER CENTER	-sand -water

(4) Opportunities to integrate action pattern.

ART CENTER	-sewing -prop box for painter -playdough -weaving -glue in squeeze bottle -gummed tape -scissors
WOODWORKING CENTER	-prop box for construction worker -screwdriver -keys and locks -latch board
BLOCKS CENTER	-hopscotch pattern -prop box for firefighter, police officer -wheelbarrow
QUIET CENTER	-spinning top -dice -magnetic fishing pole and fish

LISTENING CENTER	-triangle and striker -recorder or flute -music with directions requiring a combination of movements, e.g. "fly", "walk like an elephant", "march and clap"
WRITING CENTER	-prop box for secretary, teacher, mail carrier -tempera markers -label gun
SCIENCE CENTER	-magnifying lens -spinner/gyroscope that requires wind-up and button-push -pulley
HOUSE CENTER	-prop box for nurse/doctor, store clerk, baker, waitress, barber/beautician -dust pan and broom -buckles dressing vest -zipper dressing vest -bow tying dressing vest -lacing shoe -clothespins

SAND/WATER CENTER	-waterpump -wet sand molds -plastic syringes

Note: The teacher's role is to (a) recognize the child's representation as such; (b) to identify the level of representation; (c) to provide materials/activities that will broaden the child's current abilities; and (d) to provide materials/activities that will aid the child in moving to the next level. The teacher may facilitate the child's transition to the next level by modelling the behavior or by presenting materials in such a way as to highlight the representational use.

1 Participating in actual experiences.

Note: These tend to primarily be group activities.

- "routine"
  - putting on/taking off hearing aids
  - eating breakfast
  - eating lunch
  - eating snack
  - bathrooming
  - listening to a story
  - "music" activity
  - singing
  - birthday parties
  - fingerplays
  - "motor" game such as rolling balls
  - "jobs"
  - play/work time
  - being photographed

- "field trips"
  - nearby park
  - school playground
  - another class
  - auditorium for play or movie
  - store
  - zoo
  - city park
  - picnic
  - fire station
  - post office
  - farm
  - orchard
  - circus
  - pumpkin patch

- "projects"
  - preparing snack
  - making holiday gift for parents
  - making birthday card
  - building a blanket fort
  - carving a jack-o-lantern
  - decorating a Christmas tree
  - coloring Easter eggs
  - practicing for school program
  - making a mural
  - cooking breakfast
  - baking cookies, pie, cake, donuts
  - making playdough
  - rearranging classroom furniture
  - teacher-direct group art projects
  - flying a kite

2 Using senses to explore real objects, including art/construction materials.

(a) Sample Materials:

- "familiar"
  - pets
  - water
  - playdough
  - carpet and tile
  - radio
  - cans, bottles, boxes
  - leaves, sticks, shells, stones
  - apples, chocolate, popcorn
  - balls
- "forbidden" (typically, at home)
  - hammers, saws, drill
  - tape
  - stapler
  - dishwashing soap
  - knives
  - ladder
- "novel"
  - farm animals
  - outdoor animals such as snakes, turtles, earthworms
  - tubing
  - plumbing pipes
  - mylar
  - screen
  - flashlights
  - iced tea
  - refrigerator box

whole pineapple, coconuts

(b) Activities

- "forbidden" materials can be introduced in a small group activity or during planning to cover safety rules.

- Most of the other items can be simply put out in a center. The presentation of any given item may be varied in order to encourage full exploration. Teacher modelling is also effective.

3. Using objects/materials for their routine or intended purpose.

(a) Sample materials and their purpose:

- paintbrushes: paint
- scissors: cut
- magic markers: draw and color
- crayons: draw and color
- glue: join materials
- paste: join materials
- stapler: join and mend materials
- tape: join and mend materials
- string: join materials
- spoon: stir, eat, dig
- books: read
- puzzles: insert
- erasers: erase
- broom and dust pan: sweep
- knife: cut, spread
- cup: fill, drink, pour
- hat: wear
- milk crate: carry milk
- paper bag: fill, carry
- sponge: wash
- shovel: dig
- socks: wear
- wagon: pull, push, ride
- riding toy: ride
- egg beater: turn handle
- climber: climb
- slide: slide

(b) Activities

- Children will usually learn the routine use of an object through their own exploration or observation of others.

- When safety issues are involved or when several children are having difficulty with an object, a small group time may be used or even a few minutes of planning to introduce and practice.

1. Comparing realistic models to real objects.

(a) Sample Materials

- in the Centers: toy and real

  - hammers
  - saws
  - rabbits
  - fish
  - nuts and bolts
  - broom
  - telephone
  - utensils
  - dishes
  - pots and pans

- on field trips: toy

  - animals on trip to zoo
  - animals on trip to farm
  - animals on trip to nature center
  - airport on trip to airport
  - vehicles on neighborhood walk
  - people on neighborhood walk
  - firefighter on trip to fire station

- during cooking or eating experiences: toy and real eggs

  - fruit
  - vegetables

(b) Activities

- Simply have materials available so that relationship can be discovered through exploration.
- Set up matching games in the Centers.
- As a child is handling an item during play, planning recall, or clean-up ask him to find "the other one".
- Play a matching game during small group time.
- Set up storage so that the model and the real item are together.
- Parallel play using the model or the real object (depending on what the child is using).

2. Using realistic models of objects in play.

(a) Sample Materials

- toy plastic animals: feeding, petting, walking, putting to sleep, putting in a barn
- toy hammer: hammering, pulling out nails
- toy saw: sawing
- stuffed rabbit: petting, hopping, feeding
- plastic fish: putting in water
- plastic nuts and bolts: connecting to girders, turning, joining
- plastic eggs: cracking, putting in refrigerator
- wooden or rubber people: walking, talking, putting to sleep, feeding
- plastic fruits and vegetables: eating, cooking, washing, putting in refrigerator
- child-sized broom: sweeping
- toy telephone: talking, hanging up
- toy cars: driving down a "road", washing, putting in gas
- toy airplanes: flying, waving to.
- toy utensils: eating, cooking, feeding
- toy iron: ironing, touch
- child-sized stove: cooking
- dolls: feed, bathe, rock, put to sleep, talk to

(b) Activities

- Materials are made available in Centers. The teacher may model play with an object if the child's actions are limited.

- In a small group activity, ask each child to show a different way to play with a given object.

3. Using realistic models with part(s) missing in play.

(a) Sample Maerials

- toy animal with limb missing: feed, pet, walk
- wooden or rubber person with limb missing: walk, talk
- toy telephone with base or cord missing: talk
- toy car with wheel missing: drive, put in gas
- toy airplane with propellor or wheel missing: fly, land
- toy train with wheel or connector missing: locomote
- toy hammer with head missing: hammer
- toy boat with sail missing: propel through water
- baby bottle with bottle missing: feed
- toy pan with handle missing: cook

(b) Activities

- Materials are available in Centers.
- If necessary, set up matching games between complete version of object and version with part missing.

4. Using art/construction materials to form creation with obvious shape/form.

(a) Sample Materials

- playdough, clay, wet sand: ball, snake, pancake, donut, cookie-cutter shape
- paint, crayons, chalk, magic markers, yarn, wire, pipe cleaner, cotton balls: line, circle, square, triangle, curve, angle, s-shape, zig-zag, crescent
- blocks, wood scraps: tower, wall, road, row, bridge, enclosure, pattern
- toothpicks, straws, popsicle sticks: line, square, angle, zig-zag, triangle
- cut paper: circle, strip, square, triangle
- folded paper: hat, strip, triangle, square

(b) Activities

- Provide materials in centers
- Once a child is beginning to form these creations, his repertoire may be expanded by observing a teacher or another child.

5. Recognizing and using objects in different contexts.

(a) Sample materials are listed according to where they are usually found:

* from Art

- use playdough for cooking in House
- use Magazines in Writing
- use magic markers in Woodworking
- use construction paper to cut food-shapes for House
- use foam filler pieces, toothpicks, and paper for boats in Sand/Water
- use construction paper to make props in More than a House

* from Woodworking

- use screwdrivers for making designs in clay in Art
- use tools for "car repair" in Blocks

* from Blocks

- use unit blocks in House
- use cars for making designs in clay or with paint in Art
- use plastic tubing in water in Sand/Water

*from Quiet

- use puzzle pieces for tracing in Art
- use puppets in Blocks
- use books in Writing
- use family figures from dollhouse in Blocks
- use waterproof manipulatives in water in Sand/Water
- use balance in Science

* from Listening

  - use radio in House
  - use record player in Art
  - use scarves and ribbons in House
  - use blindfolds in Science

* from Writing

  - use paper and pencil in Blocks for police dramatic play
  - use paper and pencil in House for restaurant dramatic play

* from Science

  - use objects from nature collections for printing in Art
  - use magnets to "clean-up" nails, washers, nuts, and bolts in Woodworking

* from House

  - use mirrors for body painting in Art
  - use pans as sand molds in Sand/Water
  - use utensils in sand in Sand/Water
  - use cans and boxes for building in Blocks
  - use bottles in water in Sand/Water
  - use socks to make puppets in Art
  - use dress-up clothes in Blocks

* fromSand/Water

  - use sand in shallow box for writing in Writing
  - use eyedropper in Science

(b) Activities

- Because the object is "not supposed to be there", children are sometimes reluctant or unsure about using the object in the new context. Teachers can leave evidence of the new use of the object: a picture made by tracing the puzzle pieces, lumps of playdough in the muffin tin in the oven, the radio turned on in Art. Teachers can also actively model the use of the object during play.

6. Recognizing an object from a "sensory" cue.

(a) Sample Materials

handprints
footprints
fingerprints
feely box
smell jars
shadows
tape recorded sounds
boot and shoe prints
blindfold food tasting
plaster prints
wet sand imprints
lipstick prints
sound shakers
silhouettes
tire tracks

(b) Activities

- When possible involve children in the creating of the representations.

- Set up matching games in the Centers. Examples: matching photographs of the children with their silhouettes, matching objects and their shadows, matching pictures/objects with tape recorded sounds.

1. Using an object dissimilar to the real object for play.

(a) Sample Materials

use child-sized chairs for car

use child-sized table for car

use child-sized table and adult-sized chair for fire truck

use unit block for iron

use milk crate for chair or stepstool

use stick as spoon

use unit block for car

use poker chips as money

use blanket or sheet as tent

use flexible tubing as water hose for firefighter or gas hose at gas station

use block for telephone

use beads and string as necklace

use cardboard tube as horn

(b) Activities

- Substitute the new object where the other would typically be.
- As a small group activity, brainstorm substitutions for a given object.

  Example: What could we use to sit on instead of chairs?
- Model the behavior.
- Look for opportunities during the child's play to make a substitution. For example, if the child is role playing "going to work", quickly set up a "bus" of chairs to transport him there.

- Create a need in the play environment to use a substitute object by removing the real object

  Example: take the iron, telephone, jewelry, spoons, and/or telephone out of the House Center.

2. Creating a model of a real object from art/construction materials.

(a) Sample Materials

- clay: snake, pancake, ball, birthday cake, cookies, donut, bowl, spaceship, car, hamburgers
- paper: airplane, boat, ice cream cone, money, food, different kinds of hats
- wood scraps: airplane, car, birdhouse, boat
- boxes: camera, house, rocket, ship, drum, T.V., washing machine, firetruck, mailbox, car
- unit blocks: road, fence, house, car, tunnel
- cardboard tubes, binoculars, puppet, rocket
- paper bag: purse (add paper strip strap), puppet
- pipe cleaners: eyeglasses
- wet sand: muffins, birthday cake
- egg carton: butterfly, alligator

(b) Activities

- Materials are made available in Centers.
- Provide models of finished products and/or step-by-step pictured directions.
- Observe child's play for need for object.

3. Using created models in play context.

(a) and (b) Sample Materials and Activities

- use clay pancake and donuts in cooking breakfast in House
- use clay ball for table-top bowling
- use clay cake for birthday party
- use clay cookies for tea party

- use paper airplane with airport in Blocks
- use paper hat for role playing firefighter
- use paper food for cooking and eating in House
- use paper money for role playing grocery store

- use block fence to re-enact trip to farm
- use block tunnel for play with train
- use block house for play with wooden or rubber family figures
- use block road for play with car

- use box drum in parade
- use box T.V. with pictures drawn on roll of parade
- use box camera to take pictures
- use box washing machine to wash clothes

- use paper bag purse for mailman's bag
- use pipe cleaner glasses to "read" books
- use egg carton alligator for "monster" play in Blocks

4. Creating tracings, drawings, and paintings to depict real objects or experiences.

(a) Sample Materials

- basic:
  - crayons
  - pencils
  - magic markers
  - colored pencils
  - chalk
  - paint
  - paper

- objects to trace:
  - apple
  - barn
  - plates
  - policeman's badge

- drawings and paintings:
  - "momma"
  - pizza
  - fire
  - monster face
  - fire truck (box)
  - sequence of picture/story

(b) Activities

- Place objects for tracing in Art Center.
- Provide basic materials in Art Center.
- Provide some basic materials in the Block and House Centers.

5. Using created tracings, drawings, or paintings in a play context.

(a) and (b) Sample Materials and Activities

cut out apple tracing and sell at "store"

cut out drawing of momma (mount on cardboard) and use in dollhouse

sell pizza painting at "restaurant"

use "fire" painting for "firefighter" dramatic play

use page of food drawings for menu in "restaurant"

cut out drawing of monster face and use as mask (tie with string)

cut out tracings of plates and use as extra place settings at tea party

attach barn tracing/drawing to box and use as home for farm animals

use roll of paper with sequence of pictures in T.V. box

use painted box-firetruck for "firefighter" dramatic play

cut out tracings of policeman's badge and wear (pin or tape) during "police" dramatic play

6. Pantomiming the use of an object using the real object.

(a) Sample Materials

hammer
apple
paintbrush
scissors
hairbrush
ball
saw
coffee pot
sponge
radio
toothbrush
balloon
hose and nozzle
spoon
rolling pin

(b) Activities

- Incorporate into "planning"; each child gets an object he will be playing with and pantomimes its use.
- Incorporates into "recall "; each child gets an object he played with and pantomimes its use.
- Provide materials for a small group time.

7. Directly imitate the actions of a person/object.

(a) Sample materials

- objects:	ball
	rope
	top
	rolling pin
	wind-up walking or crawling toys
	popcorn in popper
	pop-up toy
	scarves
- person acting on:	clay
	sand
	blocks
	water
	paint
- person's actions:	walking
	jumping
	marching
	dancing
	flying

(b) Activities

- Provide materials in Centers. If desired, set objects in motion/model actions on objects.
- Plan small group activities for imitating one person's actions.
- Plan a small group activity to imitate the actions of an object.
- Look for opportunities during play.
- Teacher imitates the actions of a child during play and thus acts as a model.
- During "recall" children can imitate each other's work time actions.
- On field trips to the zoo or farm, imitate the actions of the animals.

8. Pantomiming the use of an object without the actual object.

(a) Sample Materials

* are not actually used but their presence may serve as a referent

* real objects or pictures of:

  food items

  woodworking tools

  utensils

  scissors

  writing instruments

  toys

(b) Activities

- Incorporate into "planning"; each child gets object he will be using, gives it to the teacher and pantomimes the objects used.

- Incorporate into "recall"; each child retrieves an object he used, places it in a bag or box, then pantomimes its use.

_ Plan a small group activity in which children guess what object is being pantomimed. Have the real object available as a cue.

- Provide only one of each object so that the second child will be required to pretend.

- The teacher can model this behavior by imitating a child who is using the actual object.

- Sing "This is the Way" about familiar actions at home or school
- As a small group activity, read a story and imitate people/objects seen in the pictures

9 Imitating a person/object when the referent is absent.

(a) Sample Materials

- prior actual experiences
- pictures or tracings of:
  food items
  woodworking tools
  utensils
  scissors
  writing instruments
  toys
  dishes
  pots/pans
  "Community helpers"
  field trip sties

(b) Activities

- Incorporate into "planning"; child pantomimes the object he will use without actually getting it.
- Incorporate into "recall"; child pantomimes the object he used without actually getting it.
- Incorporate into experience chart story activity; child may imitate the action of a key person or object
- Incorporate into "Home News" activity; child imitates the main action of his "news"
- Incorporate into "calendar" activity; child imitates the main key person/object for a given day
- Remove a frequently used object from the play environment. Encourage child to "pretend" to use missing object

10 Using an action to show how something or someone moves.

(a) Sample materials (i.e. things and people that move)

animals
vehicles
tools
balls
athletes (e.g. ice skater, basketball player, gymnast)
action photographs of children in class
wind-up toys
kite
hoola hoop and wheels
windmill/fan
pop-up toys, including jack-in-the-box
spinning toys
water toys
"community helpers" props
popcorn

(b) Activities

- Provide materials in centers
- Set objects in motion and model imitation behavior
- Imitate the movement of child during play
- In small group activity, play game where children guess the object or person depicted by the actions
- Movement records which have animal movements, e.g. gallop or elephant walk
- "Read" picture books about animals, vehicles, athletes and act out their movements.

- In a small group activity, set an object in motion and everyone acts out the movement. Do simultaneously as a group or do individually to get variations in interpretation.

- In a small group activity, show photographs of familiar people (classmates, family) and let each child show an action that they associate with that person.

11 Using an action to show what something or someone does.

(a) Sample Materials (i.e. things, people whose function or role can be imitated):

"community helpers"

family members

plants

cutting tools

coloring instruments

adhesives

weather elements

(b) Activities

- Provide materials in centers
- Role play in small group
- Play guessing game with pictures as stimuli for actions
- Look for opportunities during play
- Model the behavior

12 Using an action to show how something or someone looks.

(a) Sample Materials:

animals with characteristic looks, e.g. the long nose of th elephant, the wings of a bird

people with obvious facial expression of emotions (happy, sad, mad, scared)

objects with simple geometric shapes (round: ball, table, wheel; square: book, box, paper)

(b) Activities

- Provide materials in centers
- Play guessing game in small group with pictures as stimuli
- Look for opportunities during play
- Model the behavior

13 Produce the sound associated with an object.

(a) **Sample Materials**

- car: errr or beep-beep
- boat: pu-pu-pu
- train: choo-choo
- airplane: mmmmmmmm
- motorcycle: bu-bu-bu or Vroom
- clock: t-t-t-
- fire truck: oo-oo-oo

(b) Activities

- Provide materials in centers
- Model behavior
- Record sounds (tape recorder or language master) and have pictures/objects for matching in Listening Center
- Provide opportunities for children to record sounds (tape recorder or language master). Pictures/objects serve as stimuli
- Incorporate into "auditory learning" small group activities
- Play guessing game in small group with picture/object as stimulus

14. Producing a sound to pretend to be doing something.

(a) Sample Materials

- cooking materials (pots, pans, spoons, stove)
- eating materials (food cans and boxes, plastic food, utensils, dishes)
- materials for making vehicles (blocks, chairs. wagon, crates)
- vacuum cleaner
- materials for role playing community helpers
- plastic (not real) tools

(b) Activities

- Provide materials in centers
- Model behaviors
- in the Listening Center, provide a tape recording of sounds and pictures illustrating the activities
- In the Listening Center, provide opportunities for children to record sounds to go with pictured actions

15. Using sounds to pretend to be an animate being.

(a) Sample Materials:

- snake: ssss
- sheep: baa-baa
- cow: moo
- baby: waa
- dog: woof-woof
- cat: meow
- ghost: boo
- Santa Claus: ho-ho-ho
- Mother: "no"
- daddy: "sh!"

(b) Activities

- Provide materials in centers
- Model behaviors
- Record sounds and have pictures/objects for matching in Listening Center
- Provide opportunities for children to record sounds. Pictures/objects serves as stimuli
- Play guessing game in small group

16. Using a shortened version of an action or action sequence to stand for the real event.

(a) Sample Materials

- materials for role playing:
  - cooking
  - going to the doctor
  - washing dishes
  - washing clothes
  - ironing clothes
  - fixing the car
  - going to the store
  - putting out a fire
  - getting a haircut
  - going on a bus
  - going on an airplane
  - going to a restaurant
  - buying clothes
  - riding in the car

(b) Activities

- Provide materials in centers
- Model behavior during play
- Before planning time, present a brief "skit" or brief version of how materials could be used in role playing
- In small group, provide an opportunity for children to practice actions and action sequences. As necessary, provide direct direction; i.e. tell the child exactly what to do.

17. Pretending to be someone else by doing and saying what the person does and says (dramatic play).

(a) Sample Materials

materials for role playing

(b) Activities

- Provide materials in centers
- Model behaviors during play
- Adult suggestions, questions and clarifications related to roles can be offered during play
- Reduce distractions from other activities by separating the dramatic play space or by offering fewer choices
- In a small group, practice the actions and language. The teacher may assign roles and provide language models to be imitated
- In a small group, act out a story

18. Using inanimate objects as characters in play.

(a) Sample Materials

stuffed animals

baby dolls

"Barbie" dolls

single-inset puzzle pieces

puppets

dollhouse people

rubber or plastic animals

(b) Activities

- Provide materials in centers
- Model behaviors during play

1. Demonstrating an awareness that oral language stands for

(a) and (b) Sample Materials and Activities

- oral language tied to the actions and objects of the child's experience during play or group time. Must be individualized and personalized.

- objects/toys that will encourage interactions, e.g. sand, water, blocks, vehicles, dolls, dishes, balls, bubbles

- opportunities for children to interact with materials without adult intervention. The adult's role is only to label and describe

- adult labelling and description must be directly and immediately tied to objects/experiences

- small group activity: surprise box (this can be the "opening" part of any activity, including cooking).

- introducing new objects using the "tell and show" approach: talking first and then showing the object so the child won't be lost to the object before he has a chance to listen to the language.

2. Using oral language to stand for objects/experiences: receptive language.

(a) and (b) Sample Materials and Activities

- Oral language is used by the adult throughout the day in place of actual objects/experiences.

    to recall past experiences

    to pretend
    to create imaginary characters
    to talk about absent people
    to talk about absent objects
    to retrieve objects
    to retrieve pictures
    to give directions
    to tell a story

- Small group activities: "Find the ______" games, e.g. hiding games, picture lotto.

- Small group activities: games involving acting out what is heard, e.g. "Pour the sand".

3. Using oral language to stand for objects/experience: expressive language.

(a) and (b) Sample Materials and Activities

- Opportunities are provided throughout the day for children to use oral language in place of actual objects/experience:

  to recall past experiences

  to pretend

  to create imaginary characters

  to talk about absent people

  to talk about places outside of school

  to talk about absent objects

  to plan ahead

- adults model behavior
- remove familiar objects (e.g. iron, telephone, toy animals) to encourage use of language in their place
- "planning" time
- "recall"
- pictures or photographs can serve as "conversation starters" about absent objects, people or places
- questions posed by adults can stimulate representational language: "What happened?", "What are you going to do?" What would happen if...?" "What do you think it is"
- storybooks and flannelboard sotry kits
- small group activity: an opportunity for the children to be the "teacher" by telling what everyone will pretend to do or be

4. Using language appropriate to a role in a play theme.

(a) Sample Materials

- time, props, and organized space

(b) Activities

- filmstrip story narrated by children
- storybook "read" by children
- small group activity to "practice" dramatic play. The teacher directs the actions and provides language to be imitated
- dramatic play props provided in centers
- adults model the behavior during play
- adults can present a brief "skit" to model the behavior before play
- occasionally adults may directly intervene in a play session and provide a language model for a child to imitate
- act out stories as a small group activity
- in a small group, role play with table top figures

5. Understanding a variety of representation systems.

(a) Sample Materials

bar graphs
picture graphs
personal-name symbols
picture-writing
music
codes
alphabet letters
words

(b) Activities

- Lotto
- Lacing match-up
- audio-tape and code or symbol book
- label possessions (chair, locker, papers) with name symbol
- Mitten match-up
- "Fish" card game
- flashcards

6. Using a variety of representation systems.

(a) Sample Materials

paper and writing instruments
chalkboard and chalk
rubber stamps
teacher made "stamps"

(b) Activities

- "writing letters"
- labelling personal possessions
- labelling objects
- sending messages
- taking food orders when role playing "restaurant"
- keeping track of turns, materials used, cars that drive by, attendance, weather

7. Noticing that oral language can be written down and read back.

(a) Sample Materials and Activities

- picture story dictation
- experience chart stories
- "Key vocabulary cards" (children are individually asked what word they want to read, this word is printed on one side of an index card and the child draws the picture on the reverse)
- "plan" for play
- "recall" of play
- descriptions of artwork
- child-made picture book
- messages

8. Recognizing written forms of oral language.

(a) Sample Materials

labels and signs for objects, places, and possessions

teacher-made storybooks

experience chart stories

captioned filmstrips

captioned photographs

published storybooks

child-made storybooks

(b) Activities

- Provide materials in Centers
- Lotto games
- Matching games
- Language master activities
- Tape recorder activities

9. Writing down oral language.

(a) Sample Materials

- plastic letters
- alphabet blocks
- paper and writing instruments
- chalkboard and chalk
- rubber stamp letters
- tracing templates
- printed models of letters and words
- typewriter
- letter cards

(b) Activities

- "Invented Spelling"
- Provide materials in centers
- Blank "books"
- Picture drawn on top of chart paper act as "story starter".
- "Planning" for play
- "Recall" from play
- Messages
- Labels for personal possessions

10. Reading back written forms of oral language.

(a) Sample Materials

picture books

teacher-made books about field trips, or other special experiences

child-made books

experience chart stories

sentence strips from experience chart stories

labels for objects, places and possessions

reading corner or box

(b) Activities

- individual time with an adult

SMALL GROUP/LARGE GROUP

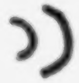
The materials and activities listed in the second part of this section are intended for that part of the schedule referred to as "Small Group" or "Large Group". Included here are materials/activities that require some degree of teacher - direction and/or supervision. This second part is further sub-divided into "Cognitively-oriented" and "Language-oriented" activities because although the two area are interrelated, at times one aspect is emphasized more than the other.

Cognitively - Oriented

* Give each child a piece of paper and three popsicle sticks. Ask them to make a picture. Then give each child two more sticks and ask the children to make another picture. Encourage the children to try making several more different pictures. Finally give each child as many sticks as he wants. Glue/paste the sticks down and ask each child to tell something about his picture. Similar activities can be done using gummed dots or other shapes, cotton ball, notebook reinforcers, stars, or pipe cleaners. Another variation is to introduce a crayon to connect the "dots".

* Introduce this activity with a camera, exploring and talking about its use. Next give each child a sheet of paper 9"x48-72" which has been divided into sections with magic marker lines. This will be a pretend giant roll of film In the first two sections, the children are told to draw something green. In the next three sections, the children are told to draw something with circles. In the remaining sections, they draw pictures related to a topic, such as what you might see at the farm, on T.V., at the circus, at the grocery store. If children have trouble at any point, brainstorm together and list ideas on the chalkboard.

* Show the children a paper with an unfinished drawing. Complete it together. Next give each child an unfinished drawing of his own to complete. Follow this with the same unfinished drawing but ask for a different picture. Some suggestions for unfinished drawings:

(a)


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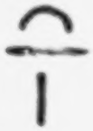
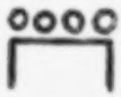
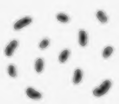
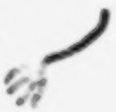


(c)


(d)


(e)


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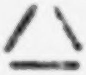

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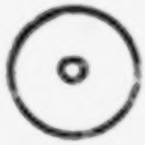


- Give each child a piece of paper on which a large alphabet letter has been drawn. The letter can be drawn sideways, upside down, on a slant, and so on. Children are to draw a picture based on the letter. Next, encourage different pictures using the same letter.

- This activity requires a room that is fairly empty, such as a gym. Tie a rope to low secure spots in all directions in the room. Children sit on scooter boards and pull themselves around the room using the ropes.

- After a rain that has left puddles, take riding toys outside. Tire tracks will illustrate different travelling distances.

- Circle games such as "Duck, Duck, Goose" provide opportunities to explore different distances.

- Pair children sitting across from each other. In front of each child is a tape line. Give the two children matching sets of objects. One child goes first, lining up his objects along the line. The other child copies the pattern along his line. Turns continue.

- Pick a destination and try to find different ways to get there. This may start out very simply, such as the classroom door, and on subsequent occasions become gradually more difficult, such as the school library, the playground, the neighborhood mailbox.

- Put on a favorite record. Dance without moving your feet. Or sit on the floor and pass a ball around without using your hands.

- See how many different ways the children can come up with to accomplish given task, such as, to move a toy across the room, to build a block house, to find a piece of paper, to hide a surprise.

* Make a tape of the following sounds: loud crashing, ringing, knocking, whistling, buxxing, and squeaking. Play one sound at a time and encourage the children to suggest what made that sound. Offer suggestions if the child is hesitant.

* Show the children a butterfly (can be made from construction paper) and ask them to find a home for it. Remember: will it fit?

* On several pieces of paper draw the same design or geometric shape (e.g. square, scribble, parallel lines, dots). Ask each child to draw a different picture on each page. These pages can be stapled together into a book which can be added to later.

* Play "Follow the Leader" with toy cars (building blocks, bean bags, wooden people) allowing each child to give directions for the others to follow. Starter ideas: "Put some gas in your car." "Make a wall with your blocks", "Put the bean bag on your head", "Make the baby walk".

* For this activity you will need one block, four cars (each different color), a pencil and paper. Make up a story about a boy who has nothing to do and only one block to play with. Each child thinks of a different way to play with the block. Do the same with the cars and then with the pencil and paper.

* Rearrange a center or the whole classroom.

* Holding a doll in different positions (on its back, on its atomach, upside down, towards a corner, looking out the window), ask the children to talk about what she sees.

* Play "I Spy", each child takes a turn sighting an object in the room and giving clues to the others (e.g. "I spy something red", "I spy something wet").

* Play "Red light, Green light"; children move forward on the "green light" and stop on the the "red light".

* Cover one child with a box or blanket. Ask the others to guess who's missing. At a higher level, place a group of objects on the table and hide one under a box. Ask the children to guess what's missing.

* Draw a line on a clear container and add objects until the water overflows. Next, add objects just until the water reaches the line. Finally, try predicting how many objects will be needed to raise the water to the line.

* Set out a bunch of blocks. See how many different constructions can be made using all of the blocks. Also, ask children to try to remember and reconstruct an earlier formation.

* Construct a 12-page booklet for each child. on the first page draw a laege circle; on the second, draw two small circles; on the third draw three triangles; on the fourth, draw four squares; on the fifth, draw a rectangle; on the sixth, draw two dots; on the eighth, draw a cross; on the ninth, draw a zigzag; on the tenth, draw three curved lines; and leave the last two pages blank for each child to decide what shapes he wants. Each child makes his own picture using the pre-drawn shapes. For variety use toothpicks.

* Show two identical pictures of a boy (or girl). Talk about what could be added to the pictures so that the people could tell them apart.

* Play "Doggy, Doggy, Who's got the bone?"; one child goes out in the hall and one child in the classroom hides the "bone". The child in the hall returns to find the "bone". The children who stayed in the classroom may give clues.

* Play "Hide-and-seek"; children cover their eyes while the teacher (or another child) hides an object. Children open their eyes and try to find it.

* With the teacher standing on one side of a piece of plexiglass and one child standing on the other, the teacher "mirrors" the child's positions. Once the children catch on, two children can be involved and the teacher can step out.

* Choose two children to stand side by side. Ask the others in the group to name all the ways that they are alike. Encourage as many answers as possible including qualities (eat, run, laugh) as well as visual similarities.

* Have available pairs of familiar objects that go together (e.g. spatula and apron, hat and sunglasses). Ask the children to name the people who might use the objects and show how that person would them. Elaborate on this activity by having the children pick two objects from an assortment, tell who might use them and how. If possible encourage a second child to give a different response.

* Pretending that there were no chairs when they arrived at school, ask the children to think of what they might sit on instead. Continue the activity by thinking of replacements for tables, beds, rugs, drapes, dresser, closets, cups, umbrellas, coats, pencils, staplers, paper, and so on.

* Tell a familiar story but encourage the children to come up with a new ending.

* Brainstorm all of the things that can be worn on one's head (feet, hands, nose, etc.) Then think of all the things that could not be worn on the head, feet, hands, nose, etc.)

* Ask each child to name two to five objects associated with a given color. Leading statements can be used to get things started, e.g. "Think of things to eat that are red". "Think of toys that are blue".

* Draw or cut out pictures of the following pairs: apple-banana; cat-dog; car-bicycle; tree-flower; chalkboard-flannelboard; straight pin-safety pin; office building-house; spoon-fork; scissors-knife. Children will think of ways that the two items are alike. This activity can be extended to abstract figures, numerals, or alphabet letters.

*Ask the children to suggest ideas for using familiar objects in new ways. Some familiar objects to begin with would include a chair, a paper cup, a paper plate, a piece of rope, a scarf, a paper clip, a paper bag, a sheet of paper. This activity can be extended by using objects with which children are not familiar such as an unusual tool or a motor part.

* Draw or cut out pictures of the following groups: (a) boy, dog, clouds with rain falling; (b) balloon, bird, tree, child; (c) ice cream cone, sun, child; (c) plane, car, family, child. With each group of pictures, ask a child to use them to tell a story. try for at least three variations for each group of pictures of the following: umbrella, tree, cloud, sun, cat, ball, boy, flower, car, and house. Allow each child to choose any three of the pictures to tell a story. As an extra challenge, try placing the pictures face down.

* Put the following materials out on the table: foil, tissue, index cards, paper clips, rubber bands, string, pipe cleaners, stickers, scraps of paper, fabric scraps, yarn, sequins, small boxes, spools, bottle caps, cardboard tubes. Ask the children to make an animal (or vehicle, person, etc.) Do not make suggestions as to placement or use of materials. Compare and contrast the final products.

Language - Oriented

Note: All "representation" activities encourage language development. Those listed here are most conducive to large and small groups.

- Role playing (people)
- Charades
- Art projects
- Simple cut-and-paste
- Songs
- Fingerplays
- Gross motor and movement exploration
- Flannelboard stories
- Flannelboard picture sets
- Filmstrips
- Cooking and baking
- Mini-field trips, e.g. corner mailbox, "leaf-hunt", neighborhood store
- Re-enact field trips
- Experience chart stories
- Act out stories
- Pantomiming (objects)
- Teacher-made story/picture books
- Child-made story/picture books
- Puppets: make and use
- Re-enact familiar/routine activities
- Picture story dictation
- Comparison or classification charts
- Woodworking or construction projects
- Simple games with rules, e.g. Lotto or Concentration
- Masks, hats, costumes: make and use
- Manipulating objects in miniature
- "Science" experiments
- On-site field trip, i.e. the person/thing comes to the school/center

VII. PULLING IT TOGETHER

PULLING IT TOGETHER

'Pulling it together' is what makes the DPHISC model unique and what makes it work. The term refers to the integration of cognitive, language, and social learning throughout the written and practiced curriculum. Although for the sake of clarity, this manual has separate divisions for cognitive, language, and social, the descriptions stress again and again the interrelationships between the three areas. It is a difficult practice to describe but thankfully, it is not quite as difficult to practice. Some teachers describe it as 'doing what is natural or common sense' rather than being directed by artificial time and activity boundaries. Other teachers describe it as requiring an investment of considerable attention and effort to achieve the same end. What all of these teachers are doing is maximizing the learning potential of each incident throughout the day. For each activity or interaction with a child, the teacher first considers what cognitive learning might take place, what language learning might take place, and what social learning might take place. She then must consider what she can do to increase the possibility that the learning will indeed occur. To do this, the teacher must be familiar with each child and his strengths and weaknesses, with the "objectives" of the curriculum in all three areas, with the interrelationship between curricular "objectives", with the scope and sequences of child development, and with the total classroom environment. The effectiveness of the teacher will vary with the strength of this familiarity, ranging from recognition to comprehension.

This undoubtedly sounds very overwhelming, even mind boggling. It's much easier than it sounds, though, as you will find when you try it for a few weeks. There are a few strategies that can make the initial experiences more likely to be successful.

(a) Forget about "objectives" and concentrate on learning with the children. When you go to the Planning Board what do you see?, what do you think about?, what problems do you have? When you are playing in Blocks, what things can you talk about?, what can you learn about spatial relationships?, what can you learn about building with other children?

(b) Spend a considerable amount of time observing the children and recording your observations. What did they do with the clay? What problems did they have? What did they talk about?

(c) Expect to spend some time just learning to manage the physical changes that you have introduced -- using centers, using open-ended materials, being independent, interacting with other children with minimal adult intervention.

(d) Spend time reviewing this manual and finding examples in your classroom.

(e) It may be helpful to select an activity and brainstorm all of the potential "objectives" that might be related to it (see the samples that follow). Then, try out the activity and see what happens.

(f) When you are beginning to feel comfortable with the manual and with the physical aspects of your classroom, pick one cognitive objective. Identify and provide materials related to that objective. Jump in and whenever possible, use those materials to guide learning towards your target objective. While you're at it, apply some of the language learning strategies and social learning strategies that you've learned.

As your base of experience and understanding grows, you will become increasingly adept at identifying teachable moments and pulling together cognitive, language, and social learning. In the meantime, bear in mind that the environment you are providing is ensuring that the children are learning. Your guidance as a teacher maximizes that learning.

SAMPLE POTENTIAL OBJECTIVES

Activity: Planning

Activity Description: Each child will trace the object(s) they plan to use during their first play episode.

Cognitive	Language	Social
(a) Problem Solving	(a) Auditory	(a) Social Awareness
-anticipate outcomes	-use of 'adaptive communication	-attention
-perceive problems		-turn taking
-identify possible solutions(s)		-following directions
(b) Representation	(b) Speech	(b) Independence
-match object to model	-practice one or two targets	-identifying information
-use art materials to depict object		-planning
-pantomime use of object		-greetings
-imitate object		-acknowledging communication requests
-use action to show how something looks		
-produce sound associated with object		
-expressive language		
-use representation system		

SAMPLE POTENTIAL OBJECTIVES

Activity: Planning

Activity Description: Each child will trace the object(s) they plan to use during their first play episode.

Cognitive	Language	Social
-write oral language		
-read oral language		
(c) Content Objectives	(c) Language-Readiness	
-actively explore relative differences among objects	-attention	
-explore closed and not closed spaces	-intentional non-verbal	
-explore distances	-vocal imitation	
-explore linear arrangements	-joint activity with adult	
-experience a marked time interval		
-coordinate past, present and future		
-noncausal sequenced event		
-compare sets of quantities		
-explore equivalence		
-experience the conventional number system		

SAMPLE POTENTIAL OBJECTIVES

Activity: Planning

Activity Description: Each child will trace the object(s) they plan to use during their first play episode.

Cognitive	Language	Social
-explore body action patterns		
-explore functional use of objects		
	(d) Language-Syntax	
	-vocal imitation	
	-length of utterance	
	-produce nouns, verbs, verb inflections, infinitives, coordinates, modifiers	
	(e) Language-Pragmatics	
	-request	
	-label	
	-instrument	
	-dialogue	
	-indicate wants	
	-share information	
	-express intentions	
	-answer questions	
	-express problems and solutions	

SAMPLE POTENTIAL OBJECTIVES

Activity: Planning

Activity Description: Each child will trace the object(s) they plan to use during their first play episode.

Cognitive	Language	Social
	(f) Semantics -differentiation of agent, object, and action -understand/name locations -understand/name objects -semantic relations -language used as representation -answer 'where' and 'what do' questions -describe use of objects -relate a sequence of events or ideas	

Sample Teacher-Child Interaction

Activity: Planning

Dialogue

(1) T: "Hi"
C: "Hi"

(2) T: "What's your name?"
C: "Four"
T: "That's not right. Listen again: What's your name?"
C: Jimmy

3) T: "Where will you play first?"
C: Points to picture of Woodworking center.

(4) T: "Woodworking?"
C: "Woodworking".

(5) T: "What will you do?"
C: "Pound" and moves arm in 'pounding' motion.
T: "What will you pound?"
C: "Nails"

(6) T: "The nails are all gone. What else could you use?"
C: "Sticks"

(7) T: "O.K. Get a crayon. You can draw the hammer and the sticks."
C: Draws picture

(8) T: "I see you have finished your picture. Let's do some speech and then you can go to woodworking. Ba - be - ba - be - ba - be."
C: Alternates ba - be
T: "Now let's try bou, bou, bou, bou"
C: Repeats bou

Cognitive	Language	Social
(3) match object to picture	(2) 'adaptive communication': auditory identification	(1) greetings
(4) expressive language to represent	(3) answer Wh-question -prelinguistic gesture	(2) identifying information
(5) use action to represent object	(4) verbal imitation	(7) follow directions -plan -turn taking
(6) identify possible solution to problem	(5) -differentiate action and object	
(7) use art materials to depict object	-express intentions	
	-answer questions	
	-dialogue	
	(8) Speech targets	

SAMPLE POTENTIAL OBJECTIVES

Activity: Play

Activity Description: Each child determines his own direction during this period. The teacher follows the child's lead and interacts, verbally, as appropriate.

Cognitive	Language	Social
(a) Problem-Solving -all levels -all types	(a) Auditory -use of 'adaptive communication'	(a) Social Awareness -all Peer Interaction skills -Group skills of turn taking and following directions -Social Play
(b) Representation -all experiences	(b) Speech -all targets	(b) Independence -some Grooming skills -some Dressing skills -some Dressing skills -Safety skills -all work/play skills -Basic Communication vocabulary
(c) Content Objectives -all experiences	(c) Language-Readiness -all experiences	

Cognitive	Language	Social
	(d) Language Syntax -all behaviors	
	(e) Language-Pragmatics -all behaviors	
	(f) Language-Semantics -all behaviors	

Sample Teacher-Child Interaction

Activity: Play (one episode)

Dialogue

(1) T: "Hi Mark! May I sit here?"
C: "Yes"

(2) T: "Wow! You have a lot of blocks on the floor!"
C: "I make a house."

(3) T: "I have a short block. Where should I put it?"
C: "Over there" and points.

(4) T: "Behind the boy?"
C: "Yeah, behind the boy."

(5) T: "What about this round block? Can I put it top?"
C: "Too big".

(6) T: "What will happen?"
C: "Fall down".

(7) T: "Say, 'The house will fall down'."
C: "The house fall down".

(8) T: "Which block can I put on top?" and holds out two blocks.
C: Takes one block, places it on top and says "All finished".

(9) T: "Hooray! Can my little girl come to your house now?"
C: "OK"

(10) T: "Hmm. Where's the door?"
C: "Uh-oh" and removes block to make door.

(11) T: Knocks on door "Ba-ba-ba-ba-"
C: Knocks on door "Ba-ba-ba-ba"

Cognitive	Language	Social
(1) -exploring distances -anticipate outcomes	(1) -answer yes/no question	(1) -greetings -socializes with adult
(2) -expressive language	(2) -respond to speech with speech (verbal dialogue) -use language to share information -use language to verbalize immediate experience	
(3) -explore parts and wholes -anticipate outcomes -expressive language to represent	(3) -answer 'Wh- question -direct other -verbalize location -prelinguistic gesture	
(4) -expressive language to represent -explore distances	(4) -verbal imitation -produce preposition	
(5) -anticipate outcome -compare by size	(5) -express rejection -answer question	
(6) -perceive problem -explore objects in relation to each other	(6) -answer question -use language to describe problem	

Cognitive	Language	Social
(7) -expressive language to represent	(7) -produce three word utterance -verbal imitation -produce N-V (object-action) sentence	(7) -cooperation -follows direction
(8) -confront a problem and try a solution -mark a time interval -rearrange and reshape materials	(8) -use language to describe experience, not action -produce relational term -use language to share information	(8) -helping others
(9) -missed opportunity to anticipate outcome	(9) -answer question	(9) -sharing
(10) -perceive problem -confront problem and try a solution -explore parts and wholes -use dissimilar object to represent real object		
	(11) -speech target	

SAMPLE POTENTIAL OBJECTIVE

Activity: Recall

Activity Description: Each child will be given a 6"x8" piece of paper. Each child will bring to the table one object that he played with. A basket of crayons will be placed on the table. Each child will trace his object on the paper.

Cognitive	Language	Social
(a) Problem Solving	(a) Auditory	(a) Social Awareness
-anticipate outcome -perceive problem -possible solution -recognize usefulness of tools	-use of 'adaptive communication technique	-sharing -recognize ownership -attention -turn taking -follow directions
(b) Representation	(b) Speech	(b) Independence
-use object for intended purpose -create tracing to depict -pantomime use of object -produce sound associated with -shortened version of action sequence -use action to show movement -expressive language -various representation systems -written language	-practice one or two targets	-attention -identifying information

Cognitive	Language	Social
(c) Content Objectives -classify with two properties -comparing relative differences -closed and not-closed spaces -parts and wholes -rearrange and reshape materials -explore shapes -coordinate past, present, and future -sequenced events -functional use of objects -integrate action patterns -object constancy	(c) Language-Readiness -object permanence -attention -use of objects -vocal imitation -joint activity with adult -simple representation	
	(d) Language-Syntax -vocal imitation -produce nouns, verbs, verb inflections, adjectives, pronouns, morphemes	
	(e) Language-Pragmatics -respond to vocalization -comment -label -share information	

Cognitive	Language	Social
	-share experience	
	-engage in conversation	
	(f) Language Semantics	
	-prelinguistic gestures	
	-differentiation of object and action	
	-associate referent with word	
	-words used to encode object used	
	-use language to represent	
	-verbalize past experience	
	-label	
	-answer wh-question	
	-describe use of object match verb to noun	
	-past tense of verb	
	-relate sequence	
	-describe object with multiple concepts	
	-answer yes/no questions	
	-answer questions with additional information	

Sample Teacher - Child Interaction

Activity: Recall

Dialogue:

(1) T: "Get one thing that you played with".

C: Gets wood construction.

(2) C: Puts project on paper. Project is larger than paper.

(3) C: Turns construction its side so it will fit on the paper.

(4) C: Uses crayons from center of table to trace around the wood construction.

(5) T: "Are you ready for me to write on your paper?"

C: "Yes".

(6) T: Tell me about your picture."

C: "I played in Woodworking".

(7) T: "What did you do?"

C: "I cut the wood, I glued the wood".

(8) T: Writes 'I cut the wood. I glued the wood'.

C: Observes.

(9) T: Reads back 'I cut the wood. I glued the wood'.

C: Observes and listens.

(10) T: "What did you put on the here?"

C: "A little round one."

(11) T: "A spool".

C: "A spool".

(12) T: "What have you written here?" Points to letter-like forms

C: "My name".

(13) T: "Let's do Speech". Taps 'little round one' and says "Boi-boi-boi-boi"

C: Repeats "boi-boi-boi-boi".

Cognitive	Language	Social
(1) Anticipate problem		(1) Follows directions
(2) Perceive problem		
(3) Possible solution		
(4) Use object for intended purpose. Traces object to depict		(4) Shares
	(5) Answer yes/no question	
	(6) Verbalize past experience. Verb inflection Pronoun	
	(7) Answer Wh-question	
(8) Writing down oral language		
(9) Reading back written language		
	(10) Answer question with additional information. Describe object with multiple concepts.	
	(11) Imitate, Label, Associate referent with word heard.	
(12) Various representation systems		(12) Recognize ownership. Identifying information
	(13) Speech target	

VIII. EVALUATION

EVALUATION

Teachers in the area of Special Education have long been involved in the process of evaluation, primarily in terms of monitoring student progress relative to their Individualized Educational Program (I.E.P.). Typically this evaluation focuses on specific, observable and measurable behaviors which have been adversely affected by the impairment. Teachers in the area of Early Childhood Education also have a long association with the evaluation process but for a different purpose and from a different perspective. Without the impetus or the constraints of IEPs, early childhood teachers evaluate the total child in his total environment for the purpose of determining whether their efforts as teachers are moving the children towards the program's goals. The DPHISC model has endeavored to bring about a blend of these two approaches; to evaluate the total child, including specific behaviors, in his total environment and to evaluate the total environment and its impact on the child. The primary evaluation tool is observation.

Variety is important in using observation as a primary evaluation tool in order to provide a complete picture. Observations should be made in different settings and at different times of the day including play, small group activities, routine activities, large group activities, playground, field trips, activities with other preschool classes, one-to-one interactions with adults, and if possible, at home. These observations should be an ongoing process throughout the school year. Observations should be made as you interact with the child and also from outside an interaction. Some observations will be spontaneous but others need to be planned. Planning will include why, where, when, the focus, and the recording system. The focus of the observation should be relevant to your goal and might include the child's interaction with materials, the child's interactions with his peers, the child's interactions with adults, the teaching behaviors of the adults, and the physical environment itself.

There are various methods of recording which can complement each other: running records, checklists, time sampling, anecdotal records, event sampling, journals, tape recordings, videotapes or charts. The final variable is the amount of time given to the observation. While it is important to know the specifics of what is happening in a classroom in order to index progress or make necessary changes, it is also important that evaluation not take a disproportionate amount of time away from guiding learning.

INSTRUMENTS

Through the years, the staff at the DPHISC model site have used an impressive array of published evaluation instruments as well as having had developed a significant number of in-house evaluation tools. The descriptions here are limited to those instruments which are currently being utilized on a fairly consistent basis. Identifying instruments which are appropriate for young children with hearing impairments, easy to administer, and produce meaningful results is a continuing effort.

The first group of instruments to be described are those that have been most functional for the classroom teachers.

(a) Ling Phonetic Evaluation. Published by: A.G. Bell Association for the Deaf, Washington, D.C.

The purpose of this instrument is to evaluate the sounds in a child's phonetic repertoire in terms of the extent to which they are present, their differentiation from other sounds, and the rate of production. The evaluation is administered individually in a fairly short period of time and involves the teacher rating the child's imitative performance. The results of the evaluation provide the teacher with broad goals and specific teaching objectives.

(b) Child Observation Record. Published by High/Scope Press, Ypsilanti, Michigan.

This instrument was developed at the High/Scope Preschool Program with hearing children to assess components of their curriculum: "Planning Time, Work Time, Recalling and Representing, Social-Emotional Development, and Communication Skills." The teacher completes a rating scale for several items under each component after observing the individual children in the classroom over a five-day period. The results can be used as possible learning objectives related to the curricular components.

(c) Grammatical Analysis of Elicited Language

Pre-sentence Level

Simple Sentence Level

Complex Sentence Level

Published by: Central Institute for the Deaf, St. Louis, Missouri.

This instrument provides a set of toys, games and activities which are used with an individual child in a structured situation. There are three different kits to evaluate different kits to evaluate different levels of syntactic development from readiness to complex grammatical structures. The Pre-Sentence level has been normed with hearing impaired children and evaluates the comprehension, imitation, and prompted production of one-to-three word utterances as well as readiness. The Simple and Complex Sentence Levels have been normed on both hearing and hearing impaired children and evaluate the prompted and imitated production of specific target sentences which are a representative sampling of sentence structures. The procedure for these two levels includes taping, transcribing and analyzing. The results give percentile rankings and standard scores and identify, specific grammatical structures to be targeted for teaching.

(d) Teacher Assessment of Grammatical Structures;

Pre-Sentence Level

Simple Sentence Level

Complex Sentence Level

Published by: Central Institute for the Deaf, St. Louis, Missouri.

This instrument is the classroom teacher's counterpart to the "Grammatical Analysis of Elicited Language". The three forms list grammatical structures in their expected order of development and with regards to their level of mastery (comprehension, imitation, prompted production, or spontaneous production). Teachers rate the individual's performance based on observations and with reference to criteria described in the manual. The results measure the child's progress related to specific language objectives.

(e) Scales of Early Communication Skills. Published by: Central Institute for the Deaf, St. Louis, Missouri.

This instrument is designed to evaluate in a general way the receptive and expressive language skills of hearing impaired children between the ages of two and nine. Teachers rate the performance of individual children based on observations and the instrument's broad descriptive statements about a number of communicative behaviors. Standard scores and percentile rankings are available and teachers can develop general language goals from the results.

(f) Play Analysis is a project-developed instrument, a a copy of which follows:

The purpose of this instrument is to utilize a child's play to index his cognitive and social development. Teachers make observations of children during play and rate behaviors according to criteria described in the "Teacher's Guide". The criteria were derived from the works of several notable researchers including Jean Piaget, Sara Smilansky and Mildred Parten. The results measure the child's progress through developmental stages with broad age norms.

(g) Observation of Cognitive Content Skills is a project-developed form, a copy of which follows:

This instrument was designed to evaluate general cognitive processes as applied to content areas. The teacher rates each child's level of skill in each area based on observations in a play situation. The results measure a child's progress in terms of himself and can be used for developing specific teaching objectives.

(h) Self-Care Observation Checklist is a project-developed instrument, a copy of which follows:

The purpose of this instrument is to assess the development of eating, dressing, bathrooming and grooming skills. Information for the ratings of specific items is gathered from observations in daily routines, semi-structured activities, and parental input. The results measure the child's progress through age-related developmental stages and can be used to develop learning objectives.

(i) Representation-Observation Checklist is a project-developed form, a copy of which follows:

This instrument was designed to measure progress related to specific curricular objectives for representation skills. Teacher ratings are based on observations of children in play situations and with reference to criteria in the curriculum guide. The results measure a child's progress against himself and within a general developmental sequence. Teachers utilize these results in lesson planning.

(j) Problem Solving - Observation Checklist is a project-developed form, a copy of which follows:

This instrument was developed to measure progress related to specific curricular objectives for problem-solving skills. Teacher ratings are based on observations of children in play and small group situations and with reference to criteria in the curriculum guide. The results are used by the teachers in lesson planning.

The next group of instruments are those which have been found to be useful in certain limited situations.

(a) Kaufman Assessment Battery for Children, Published by: American Guidance Service, Circle Plains, Minnesota.

This instrument is individually administered by a trained psychologist and is appropriate for children between the ages of 2½ and 12½. It is designed to measure intelligence apart from acquired skills. Information is gathered from observing the child's problem-solving processes in a structured situation. Language plays a minimal role in the administration and measurement.

(b) Meadow-Kendall Social Emotional Assessment Inventories for Deaf and Hearing Impaired Students, Preschool Form Published by OUTREACH Pre-college Programs. Gallaudet College, Washington, D.C.

This instrument consists of four subscales which measure (a) impulsive, dominating behaviors; (b) social communicative behaviors; (c) anxious, compulsive behaviors; and (d) developmental logs as well as three special items that are related to deafness. Forty-nine statements are rated by the teacher as to whether they apply to the child. The results do provide percentile rankings but are used primarily to flag areas of social/emotional development that may need special attention.

(c) Test of Auditory Comprehension of Language. Published by: DLM Teaching Resources, Allen, Texas.

The purpose of this instrument is to assess auditory comprehension of language and to diagnose areas of linguistic difficulty. The child points to the picture, from a choice of three, which represents the stimulus heard. The results provide a raw score, age-equivalent score, percentile rank equivalent, and standard deviations from mean for age as well as an analysis of linguistic categories. This information can be of value to the classroom teacher who needs to identify receptive language goals and objectives for a child producing complex grammatical utterances.

(d) Cognitive Skills Assessment Battery. Published by: Teachers College Press.

This instrument was designed to assess Pre-Kindergarten/Kindergarten skills, such as number knowledge; visual discrimination of symbols; visual auditory discrimination; visual-motor coordination; color, shape, and letter identification; directions; story and picture comprehension; and vocabulary. The instrument can be administered by the class-teacher. The child responds verbally and motorically to stimuli in a structured situation. The results provide a profile of skill competencies. This information can be useful in preparing children for regular education or special education primary - level classes.

(e) Brigance Diagnostic Inventory of Early Development. Published by Curriculum Associates, Inc. North Billerica, Massachusetts.

The purpose of this instrument is to determine developmental or performance levels for psychomotor, self-help, speech and language, general knowledge and comprehension, and/or academic readiness skills. Only those subtests of interest to the examiner need to be used. A number of assessment techniques can be utilized including parent interview, observation, and informally - or formally-structured activities. The teacher rates items according to the criteria given in the inventory. The results do not provide a score but do incidate a "developmental age" for each skill. This information can be useful in determining strengths and weaknesses for the total child in terms of appropriate developmental levels.

(f) Developmental Test of Visual Perception (Frostig). Published by Consulting Psychologist Press, Palo Alto, California.

This instrument was designed to measure visual perception skills relevant to school performance. These skills include eye-motor coordination, figure-ground discrimination, form constancy, spatial relations, and positions in space. The evaluation procedure requires the child to write/draw in a booklet. The results provide a "perceptual age" and "perceptual quotient" but primarily serve to flag a possible need for special attention.

TEACHERS GUIDE TO ANALYZING
PLAY OBSERVATIONS

A. Social Play Categories

1. Unoccupied: The child is not playing but occupies himself with watching anything that happens to be of momentary interest or exhibits behaviors such as just standing around, playing with his own body, following an adult, sitting in a chair and glancing around.

2. Onlooker: The child is definitely watching a particular child(ren). He may verbally interact with the others but doesn't overtly enter into the play.

3. Solitary: The child plays alone and independently with toys that are different from those used by the children within speaking distance, and makes no effort to get close to other children. He pursues his own activity without reference to what others are doing, typical of children up to C.A. 2½.

4. Parallel: The child plays independently but alongside other children. He does not try to influence the others; there is little if any verbal interaction. He plays with toys that are the same or different than the other children. Typical of children C.A. 2½-3½.

5. Associative: The child plays with other children. Everyone engages in similar if not identical activity. The children do not subordinate their individual interests to that of the group; instead each child acts as he wishes. Verbal interaction concerns the common activity. There is borrowing and loaning of materials. Typical behavior of children C.A. 3½-4 or 4½.

6. Cooperative: The child plays in a group that is organized for the purpose of making some material product, striving to attain some competitive goal, dramatizing adult or life situation, or playing formal games. There is an extended amount of verbal interaction. Typical of children C.A. 4 and older.

(Parten, 1932)

B. Cognitive Play Categories

1. Functional/Practice Play: Play involves mastering motor skills, causing events to recur, and experiencing with his senses. Typical of M.A. 0-2½.

2. Symbolic Play: Motor experiences are encoded in symbols: using objects, pretending, representing with constructive materials. Typical of M.A. 2-4.

3. Games with Rules: From informal to formalized. From individually made-up rules designed for the situation to games with established rules.

C. Process Assimilation in Play

1. Exploration: "How to _____?" "What is it?"

2. Manipulation: "What can it do?"

3. Transposition of function: "What can I do with it?"

D. Block Building Play Stages

1. Nonconstruction:

   -carrying
   -making noise
   -making body and/or social contact with others

2. Rows-Vertical and Horizontal:

   -must use at least two blocks
   -any side or end of block may be used
   -a row is only one block high and one block wide, sides or ends must touch
   -may be combined and elaborated into walls or floors
   -much repetition

3. Bridges

   -at least three blocks must be used; two blocks are placed parallel with the third spanning the space in between
   -may be combined and elaborated with rows, towers, walls, floors

4. Enclosures

   -at least three blocks must be used
   -the blocks are placed in a closed-sided shape
   -repetition and elaboration

5. Patterns

   -appear once child acquires facility in use of blocks
   -pattern is generally balanced, symmetrical
   -patterns are not names

6. Naming for Play

   -name related to function of building
   -incorporates earlier construction techniques

7. Naming and Using for Play

   -structure is utilized in dramatic play

E. Sociodramatic Play Components

   -use of objects
   -use of actions
   -use of situations
   -voluntary engagement
   -two children involved
   -agreement to procedure of play
   -lasts five minutes or longer
   -variation or successive elaboration of theme of play

F. Play as a Learning Medium

1. Functional: simple repetitive muscle movements with or without objects

2. Constructive: manipulation of objects to construct or create something

3. Dramatic: substitution of imaginary situation to satisfy child's wishes and needs

4. Games: acceptance and adjustment to rules

PLAY ANALYSIS

Child: ____________________ School Year: ____________________

		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Non-Play	Unoccupied										
	Cruising										
	Domestic act.										
	Socializing										
	Onlooker										
Social Play	Solitary										
	Parallel										
	Associative										
	Cooperative										
Cognitive Play	Practice										
	Symbolic										
	Games										
Assim Proc.	Exploration										
	Manipulation										
	Transposition										
Block Play	Reconstruction										
	Rows										
	Bridges										
	Enclosures										
	Patterns										
	Naming										
Cognitive-Social Play	Functional										
	Constructive										
	Dramatic										
	Sociodramatic										
	Games										
	Observation by:										

Criteria: Observation made at 10 minute intervals, 6 sessions per observation.

Comments:

REPRESENTATION

Observation Checklist

Child: ____________________ School Year______________

Teacher_________________

Code: (-) Not demonstrated

(±) Emerging

(+) Demonstrated

Level A.		Sensori-motor/Prerepresentation					
	1.	Participates in actual experiences	1.				
	2.	Uses senses to explore objects	2.				
	3.	Uses objects/materials routinely	3.				
LEVEL B.		Index					
	1.	Compares models to objects.	1.				
	2.	Uses model in play	2.				
	3.	Uses models with part(s) missing in play	3.				
	4.	Uses materials to form creations with obvious shape/form	4.				
	5.	Recognizes object from sensory cue	5.				
	6.	Uses objects in different contexts	6.				
LEVEL C.		Symbolic					
	1.	Uses dissimilar model for play	1.				
	2.	Creates models	2.				
	3.	Uses created models in play	3.				
2-D	1.	Creates tracings, drawings, paintings	1.				
	2.	Uses tracings, drawings, paintings in play	2.				
Action	1.	Pantomimes using object	1.				
	2.	Directly imitates actions	2.				
	3.	Pantomimes without object	3.				
	4.	Imitates actions without object/person being present	4.				
	5.	Uses actions to show how something/someone moves	5.				
	6.	Use action to show what something/someone does	6.				

7.	Uses action to show how something/ someone looks	7.				
8.	Produces object's sound	8.				
9.	Produces sound to pretend to do something	9.				
10.	Produces sounds to pretend to be animate being	10.				
11.	Short, simple play sequence	11.				
12.	Dramatic play	12.				
13.	Uses inanimate objects as characters in play section	13.				
Level D.	Sign					
1.	Awareness of language as representative	1.				
2.	Receptive language	2.				
3.	Expressive language	3.				
4.	Language in role-playing	4.				
5.	Understanding other systems	5.				
6.	Using other systems	6.				
7.	Awareness of written language	7.				
8.	Recognizing written forms	8.				
9.	Writing	9.				
10.	Reading	10.				

Problem Solving

Child____________________

School Year____________

Teacher________________

Code: (-) Not demonstrated

(±) Emerging

(+) Demonstrated

Color/Date:

	Anticipated outcome/Rec cause effect	Perceives problem/ observes discrepancy	Tries one solution	Tries different solution	Enlists objects, tools, or help of others	Notes effects of attempted solutions	Evaluates solutions	Transfers learning/ generalizes
Teacher-constructed								
Child-constructed								
Routine								
Novel								
Visible (child witnesses whole change)								
Not visible (child presented with change accomplished								
Reversible								
Not reversible								

OBSERVATION OF COGNITIVE CONTENT SKILLS

Name ______________________ Teacher ____________________

PreTest Date_______________ PostTest Date_______________

PreTest Total ____________ PostTest Total ____________

Profile

PreTest: Broken line PostTest: Solid line

Classification	*	*	*	*	*	*	*	*
Seriation	*	*	*	*	*	*	*	*
Spatial Relations (T)	*	*	*	*	*	*	*	*
Spatial Relations (E&P)	*	*	*	*	*	*	*	*
Temporal Relations	*	*	*	*	*	*	*	*
Number	*	*	*	*	*	*	*	*
	0	1	2	3	4	5	6	7

OBSERVATION OF COGNITIVE CONTENT SKILLS

Directions: Observe the child during a 45-minute (minimum) self-selection period for 10 consecutive school days (one or two days missed for illness is acceptable).

Based on these observations, rate the child's level of skill (0-7) in each content area (classification, etc.) Levels and content areas are defined below. The question for consideration is: How does the child use materials in each of the content areas?

To record the ratings on the profile, x the dot in the appropriate row and column.

Connect the "x's" with a line (pre-test - broken, post-test - solid)

Levels:

0 - Little or no regard for content ares

1 - Free exploration

2 - Observes, attends to explorations, focuses on a feature

3 - Demonstrates awareness of similarities

4 - Demonstrates awareness of differences

5 - Acts on observed similarities/differences. Explores, takes action, produces changes based on how things are the same or how things are different.

6 - Demonstrates awareness that something can be _______ AND _________. Can focus on two properties at the same time.

7 - "Invents" relationships between properties and/or actions. (These need not truly be original; from an adult's perspective, it may appear to be "awareness" or "discovery").

Content Areas:

Classification - The arrangement of objects according to a set of distinguished characteristics; groupings.

Seriation - The invention of relationships between objects and the arrangement of those objects in a series according to relative differences; comparison by size, quality, or quantity.

Spatial Relations (T) - Topology. The invention of relationships between points, lines, and regions that aren't altered by compression, expansion, or tilting.

Spatial Relations (E&P) - Euclidean and Projective. The invention of relationships between points, lines, and regions that are altered when compressed, expanded, or tilted.

Temporal Relations - The construction of time as a continuum.

Number - The operations that transform and combine number.

Ratings: + behavior present
- behavior not present

Name________________
B.D.________________

SELF CARE OBSERVATION CHECKLIST

	1-2	2-3	3-4	4-5	5-6
Eating Skills					
Dressing					
Bathrooming					
Grooming					

Pretest=green Posttest=red

		Pre	Post
	Date:		
EATING SKILLS	1-2 years		
- Eats table food with spoon independently			
- Holds and drinks from cup with one hand			
	2-3 years		
- Feeds self using spoon and cup w/some spills			
- Uses a straw			
- Scoops with a fork			
- Chews and swallows only edible substances			
- Gets drink from faucet without help			
- Uses napkin if reminded			
- Stabs using fork and brings to mouth			
- Pours into a glass with help			
	3-4 years		
- Feeds entire meal to self			
	4-5 years		
- Cleans up spills, gets own cloth			
- Clears place at table			

EATING SKILLS

	Pre	Post
Date: 4-5 years cont.		
- Uses correct utensils for food		
- Spreads with a knife		
- Serves self at table from dish		
- Helps set the table		
5-6 years		
- Passes a serving dish		
- Prepares cold cereal		
- Prepares sandwich		
- Cuts with a knife		
- Opens ½ pint milk carton		
- Picks up and carries cafeteria tray		

COMMENTS

Pre:

Post

DRESSING SKILLS

	Pre	Post
Date: 1-2 years		
- Puts hat on head and takes off		
- Pulls off socks		
- Pushes arms through sleeves, legs, pants		
- Takes off shoes if untied and loosened		
- Takes off coat if unfastened		
- Takes off pants when unfastened		
- Unzips and zips large zipper/ catch in		
2-3 years		
- Puts on shoes		
- Places coat on hook at height		
- Unfastens snaps		
- Puts on socks		
- Puts on coat, sweater, shirt		

DRESSING SKILLS

Pre Post

Date:

2-3 years cont.

- Finds front of clothes ________ ________

3-4 years

- Snaps/hooks clothing ________ ________
- Puts on mittens ________ ________
- Unbuttons large buttons ________ ________
- Buttons large buttons ________ ________
- Puts on boots ________ ________

4-5 years

- Unbuttons own clothes ________ ________
- Puts zipper foot in catch ________ ________
- Buckles/unbuckles shoes and belts ________ ________
- Dresses self completely ________ ________
- Laces shoes ________ ________
- Ties shoes ________ ________

5-6 years

- Selects clothing for weather ________ ________
- Ties own hood ________ ________

COMMENTS:

Pre:

Post:

BATHROOMING SKILLS

Pre Post

Date:

1-2 years

- Sits on potty for five minutes ________ ________
- Uses words or gestures indicating need ________ ________
- Indicates wet or soiled pants ________ ________

2-3 years

- Asks to go to the bathroom even if too late ________ ________
- Urinates or defecates in potty 3x's per week when placed on potty ________ ________
- Uses bathroom for bowel movements with only one accident per week ________ ________
- Asks to go to the bathroom during the day ________ ________

BATHROOMING SKILLS

		Pre	Post
	Date: 2-3 years cont.		
- Stays dry during nap			
- Stays dry all night and day	3-4 years		

COMMENTS

Pre: Post:

GROOMING SKILLS

		Pre	Post
	Date: 1-2 years		
- Imitates washing hands			
- imitates washing face			
	2-3 years		
- Brushes teeth in imitation			
- Washes own arms and legs in bath			
- Knows hot and cold faucets			
	3-4 years		
- Wipes nose when reminded			
- Blows nose when reminded			
	4-5 years		
- Washes own face and hands			
- Wipes and blows nose 75% of the time			
- Bathes self			
- Brushes own teeth			
	5-6 years		
- Does a weekly household task			
- Stops at curb and looks both ways			
- Adjusts water temperature for bath, etc.			
- Buckles seat belt			

COMMENTS

Pre: Post:

IX. SCHOOL - HOME

This component of the model recognizes the potential of the family to be their child's most effective teacher and it recognizes the opportunities for the transfer of learning between home and school and between school and home. Perhaps more importantly, however, it recognizes that families have individual styles, needs, resources, and time and energy commitments. Each teacher determines what types of activites are most appropriate for which parents at what time. Included in this section of the manual are some typical activities to illustrate the concept of school-home-school carryover. Teachers also design more individualized carryover activities when appropriate.

The activities for school-home-school carryover fall into two categories. The first are those designed to provide planned and direct carryover of specific classroom objectives to the home environment as well as fostering general home learning. Some of these activities suggest structured sit-down sessions while others suggest ways of integrating learning into the daily routine of home life. Samples included on the following pages are:

Daily News and Activity
Weekend Learning Experience
Language School and Home Guide
Family Fun Activity Sheets
Family Play Activity Kits
Program Newsletter
"Planning" or "Recall" Pictures

The second category of activities are those designed to foster a general sharing of information and coordination of efforts between home and school and between school and home. Samples included on the following pages are:

Home-School Folders (Notebooks)
Home News
Home-School Progress Report
"All About __________"
Home Language tapes
Child Profile

Regardless of the type of activity, the key to successful carryover is to make it individualized and meaningful for each family.

OBJECTIVES FOR HOME LEARNING

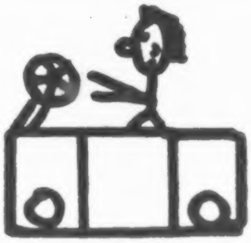
1. Child wears hearing aids all waking hours.
2. Parent identifies 5-sound test: baa, boo, bee, she, s.
3. Parent checks aid by listening with stethoscope, or earmold.
4. Child tells parent when aid's not working.
5. Parent expects child to respond to speech with speech.
6. Parent tests aid at least once every day.
7. Parent communicates verbally and with natural gestures.
8. Parent gets child's attention by calling his name or using other auditory stimuli.
9. Parent waits for child to ask for help.
10. Parent knows earmolds are to be kept clean.
11. Parent will describe purpose of hearing aid in general terms (i.e., to make sounds louder).
12. Parent will describe own child's hearing loss in general terms.
13. Parent will ignore, distract, or redirect inappropriate behavior.
14. Parent will expand child's utterances.
15. Parent encourages listening by (a) calling attention to sounds; (b) reading books; (c) having a listening time.

DAILY NEWS/ACTIVITY

This "ditto", sent home each day. Illustrates something that happened at school and suggests a simple and quick activity focusing on the same "objective" that can be done at home. Asking for a signature encourages parents to review this paper with their child.

The ditto is usually sent home in the Home-School Folder (Notebook).

At School　　　　　　　　　　　　　　　　　　Wednesday

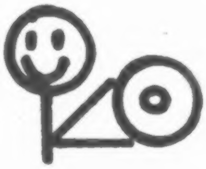


We made a car.　　　Drive the car. "Brrrr".

* *

At Home

Activity: Use a plate. Pretend it's a steering wheel. Drive the car.



What else can you use?

Can you drive fast? slow?

Stop! Go!

☐ Yes, we did it.　　　☐ No, we didn't do it.

Please sign ______________________

WEEKEND LEARNING EXPERIENCE

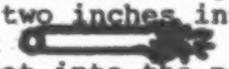
This "ditto" is sent home at the end of the week and usually suggests activities that are a little more involved and time-consuming.

WEEKEND LEARNING EXPERIENCES

☑ The ones your family did

☐ Play "Hide-and-Go-Seek" in the house

☐ Read a picture book about a house. Find the real items in your house to match the picture

☐ Make a horn using a paper towel roll: cut two inches into one end and curl it back  . Practice speech target into the play horn.

What else did you do? ______________________

____

____

Please sign ____________________________

LANGUAGE SCHOOL AND HOME GUIDE

This "ditto could be considered a home version of the teacher's lesson plans. Building from the current language unit, cognitively-oriented activities are suggested that will encourage children to learn the desired language content, form and function. The Guide is sent home at the beginning of each unit.

This week we started our "TOYS & CHRISTMAS" unit. Some activities you can do at home include:

(1) Have child follow directions you give when playing with a toy. i.e. feed the doll, then change the doll's diaper, or make the car go fast and then slow. Put gas in the car.

(2) Have child clean up own room or toybox and sort toys neatly the way they choose.

(3) Look through Christmas catalogs or newspaper ads. Have your child point out and name all the toys he/she has at home. Cut out pictures of toys that they want for Christmas.

(4) Ask your child to tell you all of the toys he/she has that have wheels and then those that don't.

(5) Make child guess what is inside a present before he/she opens it.

(6) Have child help make Christmas cookies. Ask child what some different cookie shapes can be after giving one or two examples, i.e. bell, tree, star, snowman, Santa, etc.

(7) Have your child help wrap Christmas presents. Let him/her solve problems that may arise, i.e. run out of tape, cut ribbon too short, package is too large, etc.

Vocabulary and phrases to highlight in sentences:

airplane
doll
truck
train
Merry Christmas
Thank you
Santa Claus
Christmas tree
candy cane
I don't like

blocks
wagon
broken
fix it

pull
push
ride
sled

elves
sleigh
ornaments
chimney
Hang it up
pretty

I want to___

HAPPY HOLIDAYS!

Name

Describe "Toys - Christmas" activity done at home:

FAMILY FUN ACTIVITY SHEETS

These activity sheets are sent home to coordinate with the cognitive objective(s) being highlighted at school. There are two sets for each content area (Classification, Seriation, etc.); one set is easier and one set is more difficult. The activities can be put on a ditto master or mimeograph master or "xeroxed". The graphic on the next page can be used as a heading to spotlight this ditto as something special. Generally, one activity sheet would be sent home every two to four weeks as the objective at school is changed.

DETROIT'S PRESCHOOL HEARING IMPAIRED SUPPORT CENTER

CLASSIFICATION LEVEL I

The goal of these activities is to:

(a) Help your child learn how things are the same and how things are different.

(b) Help your child learn or organize that information by grouping and sorting.

This learning begins with opportunities to explore and make one's own decisions about what should go in which pile. If you play along, use your own set of materials. Do not try to teach your child that "X" goes here and "0" goes there.

A. Basic sorting activities

****It's helpful to have something with dividers or boundaries that keeps the piles in place. Have one type of container available:

- TV dinner trays
- muffin tins
- dog dish (with two compartments)
- plastic or cardboard shoe boxes (2-4)
- pie tins (2-4)
- clean empty cans (2-4)
- medium-sized boxes (2-4)
- clear plastic bags (2-4)
- plastic bowls (2-4)
- needlework hoops (2-4)
- yarn loops (2-4)
- trays (2-4)
- plates (2-4)

****Materials for sorting listed from easier (two very different materials) to more difficult (four similar materials). Provide at least five to ten of each item.

- leaves/bottle caps
- buttons/ beans
- noodles, cotton balls
- jar lids/bottle cans/paper clips
- rubber bands/paper clips/hair pins
- bolts/lima beans/pencils
- rocks/straw pieces/nuts/buttons
- spoons/screws/pine cones/birthday candles

- an assortment of noodles (for example, macaroni, shell, rice, rigatoni)
- an assortment of beans (for example: navy, lima, split, black-eyed)
- the family's socks
- an assortment of buttons (different sizes, colors, shapes)
- a mixture of noodles and beans
- pens/magic markers/crayons/pencils
- a collection from the "junk" drawer
- pictures of family members and friends
- pictures of animals
- pictures of objects in the house (cut out from catalogues or draw yourself)

B. Sorting activities - variations

In these activities you "suggest" (not tell) some ways to group.

- Using four dolls and four cars, ask child to sort by (a) objects you can push and (b) objects you can rock
- Using four socks and four mittens, ask child to sort by (a) objects you wear on your feet and (b) objects you wear on your hands
- Using four spoons and four pencils, ask your child to sort by (a) objects you eat with and (b) objects you write with

C. Things that Go-Together

****Materials to use: Start with two piles. The number of objects in the piles depends on your child.

Pile A	Pile B
sock	shoe
toothbrush	toothpaste
pencil	paper
hammer	nail
cup	saucer
pot	lid
wallet	washcloth

soap	washcloth
envelope	stamp
key	padlock
plastic flower	vase
bottle opener	bottle cap

****Activities:

- ask your child: "What goes with a ______?"
- Put one pile of objects in a "surprise" bag, as your child pulls one object out of the bag, he then finds the matching object in the second pile.
- hide the objects from one pile in one room, as your child finds each, he then finds the matching object in the second pile.
- place the two piles on the fooor and ask your child to pair the ones that go-together.

CLASSIFICATION LEVEL II

The goal of these activities is to:

(a) Help your child learn how things are the same and how things are different.

(b) Help your child learn to organize that information by grouping and sorting.

This learning involves sorting things one way and then trying another way and maybe even a third way. It involves becoming aware than object can be "this" and it can be "that".

A. Basic sorting Activities

****It's helpful to have something with dividers or boundaries that keeps the piles in place. Have one type of container available:

- TV dinner trays
- muffin tins
- dog dish (with two compartments)
- pie tins
- clean empty cans (2-4)
- medium-sized boxes (2-4)
- clear plastic bags (2-4)
- plastic bowls (2-4)
- needlework hoops (2-4)
- yarn loops (2-4)
- trays (2-4)
- plates (2-4)

****Materials for sorting: Provide at least 10 to 20 of each item.

- four different kinds of noodles
- four different kinds of beans
- assorted buttons (different colors, sizes, chapes)
- a sampling from the "junk" drawer
- things found during a walk at the park
- four different kinds of shelled nuts
- a collection of bolts, screws, nuts, nails
- a collection of rocks, bottle caps, paper clips, and pennies
- the family's laundry
- a collection of noodles, beans, and stones
- a deck of cards
- a collection of pencils, pens, crayons and markers

The important thing is to encourage your child to try a second different way of sorting after he has sorted once. For example, if he first sorts the laundry by color, maybe next time he can sort by type of clothing or owner or where it's worn. You may offer suggestions but let him decide.

Other Activities

- Listen to different kinds of music on the radio. Note how they're the same and/or different.
- Have scavenger hunts: find all the things at home (choose one at a time.)
    - to cut with
    - to write with
    - to eat with
    - to drink with
    - to hold paper together with
    - to write on
    - to roll
    - to read
    - to squeeze
- Start with two sheets of paper (A and B). At the top of each draw a picture (see below). Join our child in looking through catalogues, magazines or the newspaper for pictures that would be appropriate to paste on each page.

A	B
House	Outside
A girl	A boy
People	Animals
Halloween	Christmas
A cup	A place
A fork	A spoon
A foot	A head
A grocery store	A clothing store
House	School

For example, on the page with the House (A), you could paste pictures of a chair, TV, radio, iton, clock. On the page with Outside (B), you could paste pictures of a tree, bird, rock, sun, boat.

The goal of these activities is to help your child begin to compare objects by size, quality, or quantity.

****Cut up patches of material for your child to explore. Some different fabrics might include: velvet, burlap, satin, corduroy, wool, cotton, flannel.

****Give your child four different sized boxes with lids to explore how they fit together.

****Let your child "clean up" the shelf or drawer where you store your pots and pans.

****Play with these household objects encourages learning about sizes: funnels, measuring cups, measuring spoons, mixing bowls, cans, hoops, storage bowls, or anything else that comes in graduated sizes (small - medium - large)

***"What can fit?" Choose a box or basket or bag. Next, collect a number of small and large items from around the house. Ask your child to guess whether each of these items will fit in the box (or bag or basket). Let him try it out.

****Let your child help to "clean up" the family's workbench by matching the nuts and bolts and then sorting them by size.

****Prepare a special meal that will offer different taste sensations to compare: crunchy (for example, celery or crackers), smooth (for example, mashed potatoes or pudding), dry (for example, toast or cookies), cold (for example, pickles or jello), sweet, sour, and so on.

****What's your child's favorite song? Sing it together: fast, slow, loud, or quiet.

****Go for a walk and collect sticks or twigs along the way. At home explore the different lengths: (a) put the same size together; (b) make a pile of long and a pile of short; (c) what can you do with the long sticks or with the short sticks?

****Get a bucket and take a walk around your house. Stop and put something in your bucket. Is it heavy? Or is it not heavy? Take that object out and go on to pick up another object.

****Provide these materials for your child to play with and learn about quantities: dry beans, macaroni, buttons, styrofoam pieces, pennies, cotton balls, washers, nuts, bingo chips. Compare the amounts in two cups or two pie plates or two rows. (Don't count!!! - talk about "more", or "less: or 'the same'")

****Use cut-up swatches of material. Encourage your child to find something in the house that feels the same.

The goal of these activities is to help your child begin to compare objects by size, by quality, or by quantity.

****Find five to ten objects in your house that have an interesting texture: rough, smooth, bumpy, soft, prickly, etc. For each object: let your child touch it without seeing it and then ask him to find something in the house that feels the same.

****Give your child the spoons (or bowls or cups) to help set the table BUT give him one less (or one more) than he needs.

****Ask your child to gather all of the shoes in the house and put them in order by size.

****Read stories that are about different sizes, such as The Three Bears or The Three Billy Goats Gruff.

****Go for a walk together and find five rocks. Put them in order according to size. Try putting them in order by weight (tricky!).

****Keep a height chart.

****After grocery shopping, ask your child to put away the cans in order of size; first put away the largest and last put away the smallest.

****"Can you find something smaller than a _______?" Use the object and/or the language to fill in the blank. Make your child think--use items like a penny, an envelope, or a comb as well as larger items. A good game for car rides or waiting rooms.

****Cut some paper into three to five different sizes. Go for a walk and collect a variety of leaves. At home your child can try taping or pasting the leaves on the matching - size paper.

****Big boxes of crayons have more than one shade of each color. Pick one color and encourage your child to order the crayons by color. For example: light blue - blue - dark blue.

****Sort a package of markers from light colors to dar colors.

****Another game for waiting rooms: ask your child to name or point to things that could fit in your purse or shopping bag.

****Collect a number of items from around your house, some that are heavy and some are light. Give your child a bucket and put one item at a time into it. "Is it heavy?"

****Ask your child to help sort the family's clean laundry. If you sort by owner, ask questions such as "Who has more socks?", "Who has more shirts?", If you sort by clothing item, ask questions such as "Are there more socks or more pants?"

****Pass out the cards from a deck so each person has the same mount. Turn the pile of cards face down. Each draw a card from the top. The person with "more" takes the pair. (Can also be played with "less").

****Your child can help you with cooking or baking and learn about quantities at the same time: "add more", "pour two cups of the same amount", "Are there more chocolate chips or nuts?"

****Take some paper and a crayon and go outside. Place the paper on different objects and rub the crayon on the paper. Compare the different textures. (This can be done anywhere really - at home, on the bus, in the doctor's office).

The goal of these activities is to help your child begin to understand the space around him and how objects relate to his space.

****Encourage your child to push his toy car over new spaces: (a) a tape road that extends into the other rooms in the house; (b) up and down "ramps"; (c) tunnels, (d) bridges; (e) a tape road that goes under a chair; or (f)"obstacles"; for the car to drive around.

****Give your child a roll of tape and let him make his own "play space".

****Provide these types of toys for your child to play with: blocks, Legos, Duplos, Lincoln Logs.

****Make your own dot-to-dots. Draw two dots. Your child connects them. Draw another dot. Your child connects to it. Draw two more dots. Your child connects to them. Keep going until his interest wears out. (It's not necessary to create a picture with these dots.)

****Go to a playground and look at things from a different point of view; hanging upside down, from under a bridge, from inside a tunnel, while swinging up in the air, while sliding, from the top of a slide or climber.

****Eat breakfast (or lunch) outside or in a different room of the house.

****Puzzles (simple - inset - no more than 12 pieces).

****Look for "shapes" in the world around you.

- circles: donuts, swiss cheese, clocks, balls.
- squares: crackers, table, window, door, wagon.
- triangles: pie, paper fan, sailboat, tent.

****Play "Simon says" while looking in a mirror: you touch a body part or do an action. Your child tries to copy.

****Hide and Seek. Hide five objects somewhere in the house and ask your child to find them. Be sure to show your child what objects you will be hiding. Tie a piece of yarn around each to avoid confusion with "not hidden" objects. Confining the space to one room is easier.

****Everyone sit in a different chair at dinner time.

****Eat lunch sitting on the floor.

****Find a large picture of an object in a magazine. Cut it into four pieces. Let your child guess what it is and then put the pieces back together.

****Make a necklace alternating buttons and empty thread spools on a string. Or alternate macaroni and cut pieces of drinking straws.

****Patterns

A. Start a pattern with three items. Give your child the box and encourage him to continue repeating the pattern. For example, you may start the "cup-cup-button". When your child continues it, it will "cup-cup-button"/"cup-cup-button"/"cup-cup-button"/"cup-cup-button".

B. Give your child the box of items and let him explore his own pattern.

  - Materials for patterns: buttons, plastic cups, bottle caps, spoons, crayons, paper clips, nuts and bolts, noodles, beans, cotton balls, or anything you have in quantity.

****Explore things that "fit-together" in different ways:

- things that hang up (phones, pictures clothing)
- things that slide (door locks, windows, shelves)
- things that turn (door knobs, light bulbs, alarm clocks, bottle tops)
- things that fill up (cups, buckets, sinks)
- things that push in (feet, keys, toast)

The goal of these activities is to help your child begin to understand the space around him and how objects relate to this space.

****These toys are excellent for this type of learning: Legos, Lincoln Logs, Duplos, blocks

****"What room of the house does this belong in?" Use pictures cut out magazines or catalogues or use the real objects or just use the words. For example, "What room of the house does an iron belong in?"

****Patterns. Give your child a box with three to five different types of objects. There should be several of each object. For example the box may contain five spoons, five buttons, five paper clips and five pennies. Let your child explore making patterns (for example: spoon-button-stone/spoon-button-stone/spoon-button-stone). For an extra challenge, you start the pattern and ask your child to continue the line by repeating the pattern.

****Ask your child to try to think of a different route to take to the ___________ (corner grocery store, mailbox, a neighbor friends house, the kitchen, the shoe department).

****Let your child participate when you decide to rearrange the household's furniture.

****Go to a playground and look at things from a different point of view: Hanging upside down, from under a bridge, from inside a tunnel, from the top of a climber, while swinging up in the air, while sliding down.

****Look for shapes in the world around you:

- circles: door knobs, tires, cups, bowl, clocks
- squares: doors, TV, bed, windows, cracker
- triangles: pie, paper fan, tent, sailboat

****Everyone sit in a different chair at dinner time.

****Go to Belle Isle or another park with paths. Talk about "going left", "going right", "going straight".

****Cut out some shapes from construction paper. Paste or glue them on a piece of paper to make a picture.

****Make a puzzle from a ball of clay or play-dough.

****Eat breakfast outside or in a different room.

****Make a simple design with toothpicks, macaroni, dry cereal, and/or popsicle sticks. Ask your child to copy it. Then let her make one for you to copy.

****Eat lunch sitting on the floor.

****Put a blindfold on your child. Touch one of her body parts with a feather (nose, ears, neck, mouth, wrist, arms, hand, ankle, feet). She should try to touch that body part with her hand.

****Play "Simon Says" while looking in a mirror; you touch a body part and your child copies.

****Give your child an empty paper roll to look through and play "I Spy" but he must look where you direct him: up, down, on the ceiling, behind the door, under the bed, on the wall, on the floor. Then he can tell you what he sees.

****Make a mobile with your child. Cut out pictures of familiar objects from a magazine. Glue to cardboard or heavy paper for durability. Make the hanging part from string/yarn and straws/sticks. Hang the pictures from the mobile. Hang the mobile from the ceiling.

****Put five things in a row. Let your child study them. Then mess up the row and ask your child to put them back in order. Things to use: five coins, five different toy vehicles, five different faces drawn on five cards, or a collection of a spoon, pencil, thimble, screw, cotton ball.

The goal of these activities is to help your child begin to understand "TIME". "Time" is a very difficult concept for young children to understand, but the activities that we do now will help your child have a better understanding of "Time" later.

****Invite your child to bake cookies with you. Stir the batter at different speeds. Set the timer.

****Reading picture books is an excellent way for children to learn about the sequence of time (for example, first the bears went for a walk, then Goldilocks came into the bear's house and last, the bears came back and found Goldilocks). If there are actions in the story, it's easier to remember.

****Play "Do What I Do". The leader does two different actions - one after the other (such as "clap-jump" or "jump-turn around" or "stomp your feet-nod your head"). The others are to repeat the same two actions in the same order. Let all of your family members have a turn being the leader.

****Play "Red Light-Green Light". Cut or color a red circle and a green circle. The players wait across the room or at the end of the hall. When the leader holds up the green "light", the players walk forward. When the leader holds up the red "light", the players must stop.

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****Use sand timers or wind up timers to get things done and to help your child learn about time:

- cleaning up his bedroom
- getting to bed
- finishing a bath
- coming in from playing outside
- finishing breakfast

****Dance or march when the music starts and stop when the music stops (like Musical Chairs). This is also a good listening activity.

****Try doing routine things at different speeds - slow, fast, really slow, really fast:

- singing
- wiping the table
- zipping a jacket
- walking to the corner
- mashing potatoes

*****"Planning at home"; your child should be able to tell you what he's going to do next. Ask him!

****For all young children, out especially children with hearing impairments, it's very important for them to know what's going to be happening. Take a minute to draw a simple picture before you go to the doctor's office or the grocery store or to a new friend's house. This can prevent some behavior problems too.

****Whenever possible try to follow the same routine everyday.

****Actively participate in seasonal activities:

- In the Fall: go to an orchard - rake leaves (they don't have to be in your yard) -- pick a pumpkin from a patch.

- In the Winter: make a snowman -- go sledding -- go ice skating at Hart Plaza.

- In the Spring: see the flowers at Belle Isle -- bly a kite -- plant your own garden (in plastic containers if you live in an apartment).

- In the Summer: play in a sprinkler or the lake -- make popsicle ice cubes -- make a paper fan.

The goal of these activities is to help your child begin to understand "TIME". "Time" is a very difficult concept for young children to understand, but the activities that we do now will help your child have a better understanding of "Time" later.

****Choose an upcoming event (birthday, trip, holiday, etc.) and mark it on a calendar. Mark off each day with your child until the event arrives.

****Cook or bake something simple (involving only a few steps). Talk about what you'll do dirst, next, next, and last. Be sure that your child is actively involved in the cooking or baking or it won't be a learning experience for him/her. (If you're inclined, draw step-by-step pictures for the directions.)

****Take walks that are for a long time and take walks that are for a short time.

****Talk about things that you do at night and things that you do during the day. You might want to make a booklet about each one.

****Act out the actions to a story that you all know very well. Keep it simple; maybe three to five different actions.

****Sort your child's clothes into piles of "old" things and piles of "new" things. Be sure that he or she decides on the piles.

****Buy or make a calendar for your child with good-sized squares. Each day draw a simple picture about the weather or something that happened (trip to grocery store, eggs for dinner, a bird on the windowsill) in that day's square. Cross off the days as they're finished.

****Make experience booklets with drawings or photographs about a special event. Each page will describe part of the whole event. For example, the booklet called "The Store" would include
(page 1): We got on the bus.
(page 2): We went in the store.
(page 3): We bought some fast gym shoes.
(page 4): We went home.

****Use timers.

****Use real life activities to explain "how long". Instead of phrases such as "in" a minute", "about an hour", or "next week", talk about "after you eat breakfast", "after you watch two TV programs", "when the street lights come on", "When momma comes home".

****Visit a local park on a regular basis during the year. Help your child to notice the seasonal changes.

****Make a photo album of family members from birth through now.

****Ask your child to think ahead, what is he going to do next? Also, be sure to keep him informed about what the family will be doing. Drawing pictures especially if the upcoming event is something not experienced before.

NUMBER I

The goal of these activities is to help your child begin to understand amounts and numbers. These activities are important for learning arithmetic (addition, subtraction, division, multiplication) when your child is older.

****Count everything:

- chairs in the doctor's waiting room
- the stairs you're climbing
- the forks on the table
- the buttons on a shirt
- windows
- cookies on a plate
- and so on

and be sure to keep counting past the numbers your child already "knows".

****Look for numbers all around you. Pick a number and see where you can find it:

- clocks
- calendars
- signs
- buildings
- boxes
- cars
- buses
- magazines

****Routine daily activities offer many opportunities to "count and see how many we need":

- clocks
- calendars
- signs
- buildings
- boxes
- cars
- buses
- houses

****Do three ____": jumps, claps, somersaults, cuts, splashes, blinks, head nods, finger snaps, turn arounds, toe touches, etc. (Of course, this can be done with other numbers/amounts too)

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****Routine daily activities offer many opportunities to "count and see how many we need":

- spoons
- cupcakes
- chairs
- pieces of cake
- cups
- napkins
- seats on the bus
- crayons

****Draw a "fill" line on the outside of two identical paper or plastic cups. Let your child pour milk/water/juice to the line "Which cup has more?" "Are they the same?" Which one do you want to drink?"

****Pass out different amounts of wrapped candy to each family member. Each person counts and tells how many s/he has. Take the candy bsck (quick! before it gets eaten) and ask your child to pass it out. Try for different amounts each time.

****Ask your child to gather all of the shoes in the house and line them up in a row. Then give him a pile of socks and ask him to match one sock to each shoe.

****Use tally marks to keep track of things in the house:

- how many cookies eaten
- how many cars went by the house
- how many doors in your house
- how many times he remembered to brush his teeth
- how many times you told someone to go to bed

****On a big piece of paper, draw five to ten circles. Paste one sticker in each circle.

****Give your child an egg carton (or muffin tin) and some buttons (or pennies, styrofoam pieces, pebbles, etc.) Tell him to put just one button in each space.

****Fill a Chinese checkerboard with marbles.

NUMBER II

The goal of these activities is to help your child begin to understand amounts and numbers. These activities are important for learning arithmetic (addition, subtraction, multiplication, division) when your child is older.

****Count everything:
- chairs in the doctor's waiting room
- the stairs you're climbing
- the forks on the table
- the buttons on a shirt
- windows
- clothespins on the clothesline
- cookies on a plate
- and so on

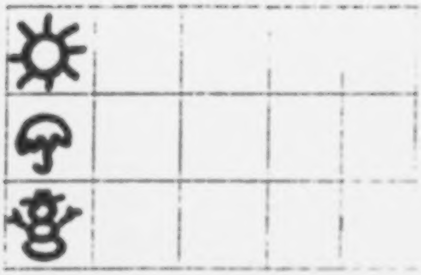
****Many fingerplays and songs include counting. Remember some from when you were young, check the library or ask your child's teacher. (a mind tickler: "This Old Man", "Ten Little Indians", "Ten in the Bed", "Five Little Monkies").

****Look for numbers all around you. Pick a number and see where you can find it:
- passing out cookies
- setting the table
- getting on the bus (how many seats?)
- in the doctor's office (how many chairs?)
- at the movies (how many tickets?)

****Make picture graphs of:
- the weather
- cars going by the house

- cereal eaten for breakfast
- clothing worn

A picture graph looks like this:



This one is for weather. Each day you fill in a square.

****Simple board games such as "Candyland", "Cherry-O", "Chutes and Ladders" are good for learning about numbers if you play for fun (don't stick to the rules all of the time).

****Things to do when cutting fruit:

- let your child fit the pieces back together
- cut the pieces to be different-sized (talk about bigger-more and smaller-less)
- cut different amounts from different pieces (cut one banana into six pieces and another into three pieces)
- pass out the pieces of fruit. "Who has more?", "Who has less?"

****Number books. Make a book with five pages. Number the pages 1,2, 3, 4, 5,. On page 1 draw or paste one thing. On page 2, draw or paste two things. On page 3, draw or paste three things. On page 4, draw or paste four things. On page five, draw or paste five things.

You can also do this activity with paper plates or boxes.

****On an adventurous day, invite your child to help you with some baking. Measuring water, milk, sugar, salt and flour offers many opportunities to compare the amounts and talk about "more", "less", "the same".

****Invite your child to help you sort the laundry. Sort by item, rather than person. "How many towels are there?" Put away the kitchen towels, "Now, how many towels are left?" "How many did you put away?" Continue with socks, pants, shirts.

****Routine daily activities offer many opportunities for beginning to join sets together (and) and take away from sets (subtract):

- "Daddy gave you two books and Auntie gave you three books. How many do you have now?"
- You had five pennies. Now you only have two. How many did you lose?
- You ate four cookies, you want two more. How many will be in your stomach?

Sometimes using some type of counter (bingo chips, buttons, straws, sticks) can be helpful to illustrate.

ACTION PATTERNS
LEVEL I

The goal of these activities is to help your child:

(a) practice basic actions such as
pouring, bending, cutting, pasting,
coloring, stretching, painting,
pulling, floating, and climbing.
and
(b) Learn about objects through actions

****Listen to different types of music (the radio is easiest) and try different ways of dancing. You may want to watch some different types of dancing, (ballet, waltzing, square) on TV or in person to spark some new ideas.

****Pinching clothespins onto a box or clothesline is a nice quiet activity and is a great strengthener for the writing muscles.

****Make a wagon with a box and a piece of rope. Challenge your child to try pulling it with different "loads".

****Provide your child with some scissors, paste, paper (different colors and textures and fabric scraps. Give her some time to explore what you can do to these materials.

****Listen to some music and dance with only one body part at a time (e.g. just your arms, just your legs, just your shoulders).

****Provide your child with several kitchen items (such as measuring cups, sifter, spoons, bowls, funnel) and a cup of salt or sugar. A low tray, box or tub is also a good idea for keeping things under control. Give your child some time to explore the different things he can do with the utensils.

****Try running to the corner different ways: fast, slow, backward, sidways, zig-zagging.

****Explore the playscape at Belle Isle or another nearby playground.

****Be sure to allow enough time for your child to "do it herself". Given the opportunity to practice, your child will soon be able to do it more quickly and efficiently. But for now, schedule the time and be patient. Resist that impulse to do it for her!!

****Find all of the things in the house that you:
- pull
- push
- roll
- pound

****Explore the different ways to move from the bathroom to the kitchen: crawl, hop, roll, skip, what else?

****Try walking with each foot in a shoe box.

****Pick an object (such as a rubber band, towel, ball, piece of paper, pencil, cup) and each family member must do a different action with the object (such as roll, bend, bounce, fold, throw, drop, rub).

****Go to a park or anywhere with some wide-open space. Let your child go. Children who live in the city don't get to really stretch their big muscles very much and its very important to later learning.

****Small muscles need exercise too. Ask your child to pick up the spilled buttons or beans.

ACTION PATTERN
LEVEL II

The goal of these activities is to help your child:

(a) practice basic actions such as pouring, bending, cutting, pasting, coloring, painting, climbing, pulling, stretching.

and

(b) learn about objects through actions

****Kick a large ball (such as a beach ball) towards a wall. Try to make it bounce back. Try to keep it going.

****Listen to different types of music (the radio is easiest) and try different ways of dancing. You may want to watch some different type of dancing (ballet, couples, ballroom, square, folk) on TV or in person to spark some new ideas.

****Explore the playscape at Belle Isle or another nearby playground.

****How many ways can your child move from his bedroom to the kitchen? Some starter ideas: crawl, roll, hop, slide....

****How many different ways can your child think of to "carry" a book from the living room to his bedroom? Some starter ideas: on his head, in a bag, under his arm.

****Find all of the things in the house that you can:

- pull
- roll
- push
- fold
- swing

****Go to a park or anywhere with wide-open spaces. Children who live in the city don't get enough opportunities to really stretch their large muscles and it's very important for later learning.

****Challenge your child to try two actions together such as: run and jump, jump and turn around, run and clap, slide and wave.

****Give your child an object that he's probably never seen before. Give him sometime to explore the object.

****Provide opportunities for your child to play different "ball" games: badminton, basketball, croquet, bowling, T-ball, whiffle ball, paddle ball, scoop ball. (Most drugstores carry inexpensive child-versions of these games.)

****A toy tool set, if safe and realistic, is great for learning.

****Fly a kite.

****Play "Simon Says"

****Play "Statue". Change positions at the beat of the drum (or pie tin).

****Ask your child to keep his hands behind his back and using his legs and feet only, follow these directions:

- "Put the baby doll on the couch".
- "Take off one sock and pretend to wash the floor with it".
- "Color on the paper with a crayon".

****Provide your child with a group of two or more items. Give her time to explore ways to use them.

- string or yarn, paper and tape
- one cup of water, one cup of flour and a bowl
- colored paper, some boxes and paste
- straws, thread spools and string or yarn
- an egg carton, straws, crayons, and scissors

The goal of these activities is to help your child:

(a) begin to explore the properties of objects

(b) begin to recognize different ways to use an object other than its routine use

****Invite your child to help you with any of these simple mixture recipes:

- Kool-aid
- Instant milk
- bubbles
- instant pudding
- instant potatoes
- juice ice cubes
- jello
- hot chocolate

****Draw a picture with chalk dipped water.

****Collect together some odds and ends such as cans, rocks, boxes, bottles, tubes, wheels, strawberry pints, meat trays. Invite your child to try different ways of stacking them. Or try different ways of lining them up.

****Color with crayons on sandpaper. Try different kinds.

****Start with a package of frozen or mix bread dough. Let it rise according to the package's directions. Punch it down (they'll love this!). Give your child some to play with like play-dough.

****For any artwork, whether it's crayons, markers, chalk, or paint, try different paper textures: waxed paper, shelf paper, tissue paper, wallpaper, wrapping paper, paper bags, paper plates, corrugated paper, cardboard and so on.

****Playing in water is a great learning experience. You may want to save this for bath time or outside in the summer so the mess won't seem so bad. All you need is water and things from around the house: sprinkling can, squeeze bottle, funnel, strainer, colander, spoon, boat, measuring cup, pitcher, plastic tubing, cup, plastic hose, plastic flower pot, plastic strawberry pint and so on.

****Give your child a magnet (or two or three) and a box of odds and ends to explore: metal things (cardboard, playing card, old photograph), wooden things (thread spool, popsicle stick, tooth picks), stones, sponges, cotton balls and so on.

****In the kitchen, set out six cups and hide a surprise under each cup. Let your child explore and find each surprise. Next, ask your child to hide the objects for you to find.

****Put a familiar object or food into a bag. Your child closes his eyes and tries to guess what is in the bag by touching, smelling or listening only.

****These activities focus on using an object in a way different from the way it is usually used.

What To Do:

(1) Provide the materials

(2) Ask the questions:

"What else can we do with a _____?"
"What's a different way to use a _____?"

(3) Wait a few minutes for your child to think about it.

(4) Play along. If your child is having a hard time getting started, give her a suggestion (for example, "Can you roll it?"

Materials To Try:

(use only one at a time)

- a piece of paper (is usually to write on, different uses: to sit on, to put over your head, to make a fan, to make a mask).
- a box (is usually to hold objects, different uses: to hide under, to make a bus, to sit in, to roll).
- a cup is (usually for drinking. different uses: to roll, to trace, to hide a button, a doll's hat).

Getting the idea? Here are some other materials to try:

- string
- a chair
- an earring
- a bucket
- a paper bag
- a hand towel
- a toothbrush
- a spoon
- a scarf
- a popsicle stick
- a clothespin
- a thread spool
- a comb
- a purse
- a cotton ball
- a tissue

****Fill a box with dirt, sand, salt, leaves, styrofoam pieces, peas, Easter grass or shredded newspaper. Hide a small familiar object in the box and invite your child to try to find it.

The goal of these activities is to help your child:

(a) begin to explore the properties of objects

(b) begin to recognize different ways to use an object other than its routine use.

****Fill a box with dirt, sand, leaves, styrofoam pieces, peas, Easter grass or shredded newspaper. Hide a few small objects (small ball, toy car, spoon, shell). Invite your child to try to find the objects but guess what they are before she looks.

****Explore what magnets do with a box of metal things (toy, car, spoon, coin), wooden things (tooth pick, thread spool, popsicle sticks) paper things (playing card, small box, old photograph), stones, sticks, shells, sponge, cotton balls and so on.

****Invite your child to help you with any of these simple mixture recipes:

- Kool-aid
- instant pudding
- jello
- Instant potatoes
- juice ice cubes

****Explore what floats and what sinks. It may be best to save this for bath time or for outside in the summer. Help your child to collect a variety of objects and try them out - does it sink to the bottom or float on the top?

****Make your own soil:

(a) crush small rocks with a hammer (be careful)

(b) grind up/break up old leaves (look under bushes or shrubs)

(c) mix the crushed rocks and ground-up leaves

****Collect some scraps and junk from around the house and try to make something: an airplane, a car, a puppet, a mask, a city, a robot. Try to to make do with your original collection - don't go searching for something you need.

****Start with a package of frozen or mix bread dough. Let it rise according to package's directions. Punch it down (they'll love this!). Give your child some to play with like play-dough.

****Put several objects on the table, such as: a piece of paper, a rubberband, a spong, a paper cup, and a plastic cup. Ask your child to listen and follow your directions:

- blow each object
- fold each object
- drop each object
- put each object in a sink with water
- roll each object
- put each object on your head

****These activities focus on using objects in ways different from the way they're usually used.

What To Do:

(1) Provide two or three materials

(2) Ask the questions:

"What else can we do with _____?"
"What's a different way to use _____?"

(3) Wait a few minutes for your child to think about it. Let her act out the different use.

(4) Play along. If your child is having a hard time getting started, take your turn first.

Materials To Try:

- paper
- a box
- a cup
- a string
- a chair
- a scarf
- a popsicle stick
- a tie
- a thread spool
- a plastic bottle
- an earring
- a bucket
- a paper plate
- a paper bag
- a hand towel
- a comb
- a purse
- a cotton ball
- a tissue
- a laundry basket

****"Now What Shall We Do?" In this activity, a familiar object is "missing" and must be replaced with something else. The activity can be imaginary or it can be real. That is, you can just say to your child: "Pretend there were no cups in our house, what could we use instead to drink from?" OR you can really hide your cups and offer your child some juice (ask the same question). Interesting things to eliminate:

- dresser
- bed
- chairs
- a favorite toy
- umbrella
- lamp

FAMILY PLAY ACTIVITY KITS

The base for the Activity Kits are semi-structured activities designed to foster specific problem-solving and representation abilities as well as to broaden content concepts. These sample titles illustrate: "Two Don't Belong", "Go-Togethers", "This AND That", "Parts", "Upside Down", "What's New?", "What Can It Do?". Every kit may also be tailored to the current Language Unit or Theme. For example, if the Language Unit was animals, the "Go-Togethers" Kit would utilize pictures of animals and their homes or plastic baby and mother animals.

Each Kit contains directions for "how to" do the activity and it contains the required materials. The materials are generally pictures or small manipulatives but a few Kits include audio-tapes for listening and recording. The materials are provided in sufficient quantity to permit several family members to be involved. The contents of each Kit are contained in cardboard "activity boxes". Kits are sent home only when requested by a family.

PREPRIMARY HEARING IMPAIRED CHILDREN

NEWSLETTER

February

Dear Parents,

We certainly are actively experiencing winter: it's cold and we have lots of snow. Bundle up and join in the outdoor fun. For those times when you must stay inside, check out the information and ideas in this month's newsletter to keep away the winter crazies.

We have been learning about the people in our community who help us. We've been trying out their tools and equipment. We've been pretending to do their jobs. We've been very busy!

HAPPENINGS!

IN ROOMS 102 and 108 (Donohue and Bazo)

D'Angelo and Terenza had a great time pretending to be policemen. They handcuffed, fingerprinted and locked Ms. Bazo in jail.

Salathiel covered a balloon with paper mache and painted it red. He gave it to LaJuane to take home.

Matt made a plaster of paris scrimshaw necklace but he fell and the necklace broke.

Tamniesha made playdough from a picture recipe. She cut out a heart shape. She painted it.

LaJuane played with the Simon game. He could push five colors in the same order as Simon.

Antonio put on his mittens and played with the snow in the water table.

Ebony dipped a small car in pink paint and drove it around on the paper.

Muffin (our hamster) ran away and came back three times.

Marvin and Jonas built a "go-cart" with wood, nails, and hammers. They worked on it for four days.

Gweneven can fit more things into the refrigerator than anyone else.

IN ROOMS 203 and 311 (Belt and Nolan)

David figured out how to use the pulley to lift a bowl of marbles without spilling.!

Nathan and Sheila mixed some vinegar and some baking soda. They laughed when it bubbled and overflowed.

Stanley used watercolors to paint the letters in his name.

Gerald and Kathryn made a long road with blocks and tried over and over to get the spark plug car to go further without falling off.

Monica is moving. We will miss her!

Ronald mixed some water into the sand. He made mud!

Tony pretended to be a construction worker. He wore a hat, goggles, and a belt. He used some tools: a hammer, a saw, and a drill.

Ellen started going to Kindergarten in the afternoon.

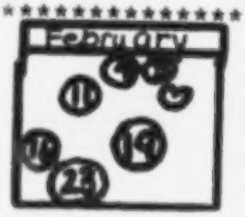
Tunisha typed the letters in her first and last name. She also typed Sheila's name and Gerald's name.

Isaiah has been playing with the firetruck. He made the firetruck sound: woo-woo-woooo.

****

Reading books is a great listening and language experience.

****



February School Events

(4) Parent Aide Day
(5) Visitors from Ann Arbor Hearing Impaired Program
(11) Early Dismissal (11:00): Evaluation Day
(16) Field Trip to the Fire Station
(19) Happy Birthday to David!
(23) Parents Workshop: Language Learning (11-12:30)

****

Hearing aids make sounds louder.

****

PARENT CENTER

SOMETHING NEW!!

"Hearing Aids: A Daily Check"

This is a filmstrip and audiocassette to help answer all of your questions about checking hearing aids. A working hearing aid is VITAL to your child!

This CANNOT be checked out but you can come in to see it -- any day -- any time between 8:00 and 4:00. The program runs about 10 minutes. Call ahead and we'll set it up for you.

****

Tell your child when his hearing aid is not working.
This will teach him to tell you too.

****

PARENT AIDE PROGRAM

A VERY BIG "THANKS!" to Ms. Winston for the beautiful materials she made for the Speech Kits.

The next Parent Aide Day is March 4. The weather can be pretty yucky but we hope to see you! Or maybe you'd like to make something at home. Be sure to return the flyer!

* * *

Pick a word that you would like your child to learn.
Try to think of 10 times you can use that word
in everyday and fun activities.

* * *

Community
Agencies

Agency: Visiting Nurse Association

Address: 7700 Second Avenue 48202

Phone: 875-3277

Contact: Joan Matthews, Community Relations Director

Services:		
	Home Care Nurse	Occupational Therapy
	Physical Therapy	Nutrition
	Medical Social Work	Home Helper Service

Hours: 8:00 - 5:00, Monday-Friday

Eligibility: Anyone under the care of a physical while living at home and within the service area.

Cost: Based on cost to agency. Payments covered by patient or family health insurance, VA benefits, or Medicare/Medicaid.

* * *

Earmolds need to be washed with warm soapy water
and rinsed when they look dirty.
Wax build-up blocks sound.

* * *

EAR NOTES

We have some GREAT hearing aid wearers! Is your child's name on this list?

David
Stanley
Joans
Terenza
Sheila
Ellen
Tunisha
Marvin
Nathan
Kathryn
Matt
Tony
Ronald
Isaiah
Gerald
Gweneven
Salathiel
Antonio
LaJuane
Monica

*Children can experience severe injury or even die by swallowing a hearing aid battery. Lower this risk by:

- keeping batteries in a child-proof place
- throwing away used/dead batteries
- not allowing children to play with batteries or battery packages

****

Children with hearing impairments need to wear
their hearing aids during all waking hours.

****

SPECIAL ♡ FUN IN FEBRUARY

- Call your local branch of the Detroit Public Library for information about movies on Saturday afternoons.

- Call the Children's Museum (494-1210) about planetarium demonstrations for young children.

- Ground Hog Day Celebration on Sunday, February 2 at Stony Creek Metropark (1-800-552-6772).

- See a slide show about dinosaurs at the Sterling Heights Nature Center on Thursday, February 6 at 7:30. It's free. (977-6200).

- See the Wizard of Oz live (not a movie) at the Cannon Recreation Center. Call 267-7148.

- Outdoor hiking, games, and crafts for preschoolers at the Sterling Heights Nature Center on Saturday, February 8. Call 977-6200.

- See "The Clown Conspiracy" at the Southfield Civic Center on Saturday, Debruary 15. Call 354-4717.

- Make bread. Children love to "knead" and "punch down" the dough.

- Sleigh rides are waiting for you on Sunday afternoons at the Kensington Metropark Farm Center. Call 1-800-662-6772.

- February 2 is Ground Hog Day. Go outside and see your shadow.

- Grow a sweet potato in a glass of water.

- Make some warm lemonade. It feels good on sore throats.

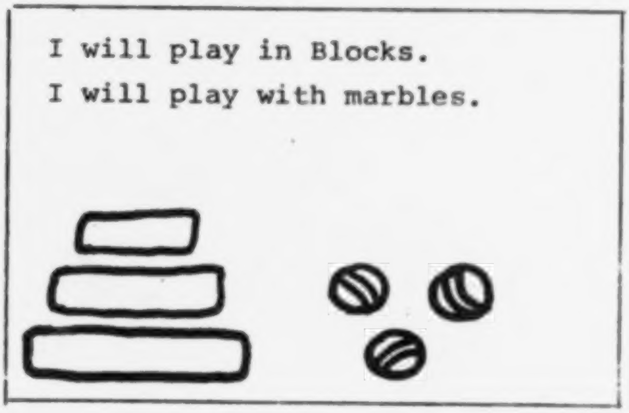
- Practice forward and backward somersaults.

- String popcorn and hang it from the trees for the birds.

- Play "hide and seek" with a toy.

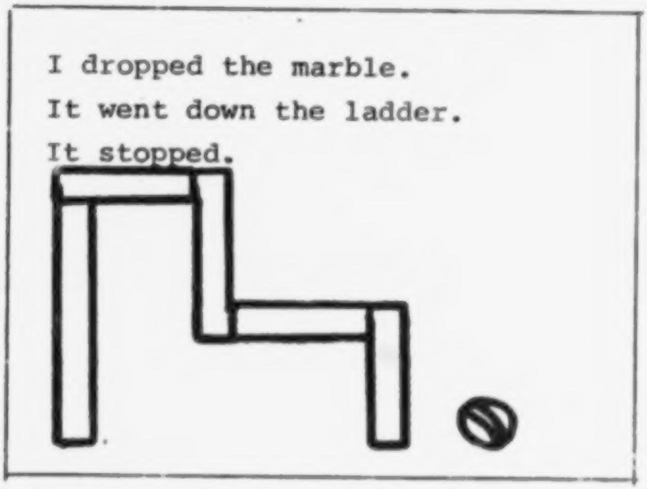
PLANNING OR RECALL PICTURES

As described in "The Schedule", each day every child makes a representation of something that he is going to do or something that he has done. Often these representations are pictures which may then go home. This is an excellent way for communicating individual cognitive and language goals to parents.



I will play in Blocks.
I will play with marbles.

Planning



I dropped the marble.
It went down the ladder.
It stopped.

Recall

HOME - SCHOOL FOLDER

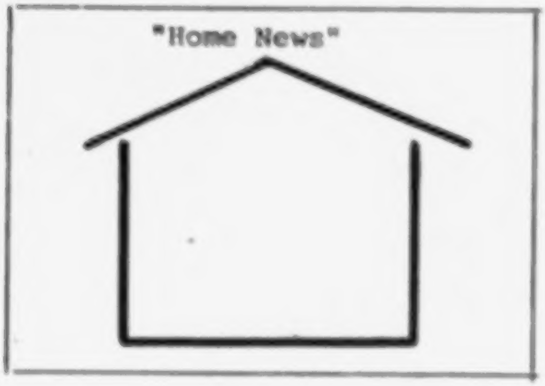
A folder with pockets for transporting papers and notices and fasteners for paper to write messages. The folder is sent home every afternoon and is returned to school every morning.

HOME - LANGUAGE TAPES

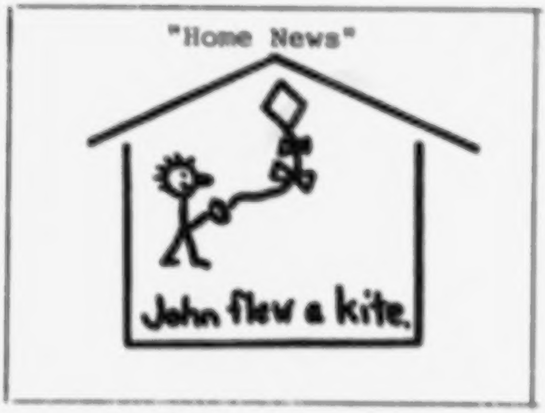
Families are provided with audio-cassettes for recording samples of their child's language at home. Specific directions are not provided but suggestions are given for suitable semi-structured activities, such as looking at a book, playing a lotto game, looking out the back window, making kool-aid and so on. The tape is returned to school. This activity is optional and can be initiated by either the teacher or the family.

HOME NEWS

The "Home NEWS" ditto is sent home every Friday. It is returned on Monday with a representation of something that the child did during the weekend. The representation takes many different forms: photographs, a drawing by a parent, written language with a picture, written language by itself, or a "momento" from the activity. The "Home News" returned on Monday is shared informally with the teacher and any interested children.



Friday



Monday

HOME PROGRESS REPORT

Dear Parent,

Parent-Teacher Conferences are scheduled for next week. This will be a time when we can talk about how your child is doing at school and at home. To help us make the most of this conference time, please think about the following questions and perhaps make a few notes before coming to the conference. I'll look forward to seeing you: ______________

____

***What are some things that your child has learned since_______?

Language ____

____

Listening____

____

Speech____

____

Thinking____

____

Self-Help____

____

Social____

____

***What are some things that you would like your child to learn during the next three months?

Language____

____

Listening_______________________________________

____

Speech____

____

Thinking____

____

Self-Help_______________________________________

____

Social____

____

ALL ABOUT ______________________________

Parent Description of your child

Dawn Smith

Project DPHISC
Goldberg School
1930 Marquette
Detroit, MI 48208

These materials were prepared with funding from the Office of Special Education Programs, U.S. Department of Education under the grant number G00832291.

Dear Parents,

This survey will help us to better know your child. It is designed to give us a picture of what he/she is like outside of school. This information will help you to be a better teacher at home.

Please think carefully about each question and answer it honestly. We do not expect your child to be able to do all of the things listed on the survey at this point in time. We need to know the things he/she CAN'T do, so we will know how we (teachers and parents) can best help.

The survey is a little lengthy but please do not feel rushed to get it back to school.

If you have any questions along the way, please call Ms. Smith at 895-1162.

Once again, thanks VERY much for your cooperation.

A. General Information and History

1. Today's date ______________________
2. Who is completing this report? _______________
3. Mother's name: ________________________________

   Address: _____________________________________

   Phone: _____________________
4. Father's name: _________________________________

   Address: _____________________________________

   Phone: ____________________
5. Brother's and sister's names and ages: ___________________ _____

   ___________________ _____

   ___________________ _____

   ___________________ _____
6. Who does your child like to play with?

   ____
7. What activities does your child enjoy doing?

   ____
8. What are your child's favorite playthings?

   ____
9. Does your child wear a hearing aid at home?

   ____

B. Thinking Skills

This section covers the skills involved in learning to learn, to read, and to do calculations. Check ( ) the box after each question that best describes your child.

Does ________________________________:

	Always	Sometimes	Starting To	Doesn't Do
1. Match pictures?				
2. Recognize a part as belonging to a whole (a tire belongs to a car)				
3. Recognize some printed words?				
4. Know that different activities are done at different times of the day? (breakfast in the morning, not at night)				
5. Pretend to read aloud?				
6. Name the things he makes?				
7. Recognize when somehas a toy or clothing item like his?				
8. Try new activities willingly?				
9. Know what things "go together"?				
10. Understand "before" and "after"?				
11. Recognize his own name?				
12. Recognize the cues for meals and bedtime?				
13. Name coins?				
14. Match things that are red?				
15. Like being read to?				
16. Like to draw pictures and copy designs?				
17. Seem to have an idea on how to make new toys/materials work without asking for help first?				

B. **Thinking Skills**

	Always	Sometimes	Starting To	Doesn't Do
18. Make products that take more than one day to complete?				
19. Recognize himself and familiar people in photographs?				
20. Remember a series of events (first, we ___, then we ___, and then we ___)?				
21. Print lower case alphabet letters?				
22. Confuse the colors green and blue?				
23. Match the number to the amount?				
24. Know which activities are appropriate for day and which for night?				

C. Communication Skills

This section covers skills involved in getting information from one person to another. Check ( ) the box after each question that best describes your child.

Does_________________________:

*Note: Some of the items may describe things that your child used to do but doesn't do now because she/he is older - please do not mark these.

	Always	Sometimes	Starting To	Doesn't Do
1. Recognize when you are asking a question (either by looking around as if searching or by answering)?				
2. Use common expressions such as "I don't know" or "excuse me please?"				
3. Say two-word sentences (examples: "go bye-bye", "car broke")?				
4. Take turns when talking?				
5. Play at making sounds when alone?				
6. Use "isn't", "can't", or "won't" in sentences?				
7. Ask questions that start with "how" or "why"?				
8. Use words most of the time (rather than gestures) to indicate what she/he wants or needs?				

C. Communication Skills

	Always	Sometimes	Starting To	Doesn't Do
9. Say three-word sentences (examples: "I go bye-bye", "Jimmy broke car")?				
10. Say words like "no more" or "all gone"?				
11. Talk about future events (holidays, special trips)?				
12. Ask questions such as "what this?", "where going?" "what doing?"				
13. Produce animal sounds (cow-moo)?				
14. Play "pat-a-cake" or "peek-a-boo"?				
15. Use feeling words: "I'm made/ tired/happy/sick"?				
16. Answer personal questions: "What's your name?", "How old are you?", or "Are you a boy or girl?"				
17. Use the same sound/word consistently to get your attention?				
18. Ask questions to find out "how far" or "how often?"				

C. Communication Skills

		Always	Sometimes	Starting To	Doesn't Do
19.	Say action words such as "go", "push", "open"?				
20.	Like to explain the cause of something by using the word "because"?				
21.	Know numbers (1-10) and colors?				
22.	Imitate adult "mouth play" such as blowing, tongue clicking, lip smacking?				
23.	Initiate conversations?				
24.	Use pronouns: I, me, mine, you?				
25.	Tell long stories?				
26.	Answer questions with a word or words?				
27.	Say four-word sentences?				
28.	Have at least five to seven words that people can understand?				
29.	Use gestures such as pointing, showing, or giving?				
30.	Ask serious questions such as "what is this for?" or "what does that mean?"				

C. Communication Skills

31. How does your child make his/her needs and interests know to you? Please check all that apply.

_______ cries or whines

_______ Babbles (a sound repeated: gagaga or bababa

_______ Use his/her own special language

_______ Sounds (e for example as in eat or a as in aah)

_______ Gestures (for example: pointing for food or tugging for attention)

_______ Single words

_______ Puts words together

32. If your child is talking/using words to communicate, please give one or two examples of what she/he says in the following situations:

(a) Meal time ______________________________

____

(b) Playing alone ______________________________

____

(c) Playing with others ______________________________

____

(d) When needs something ______________________________

____

C. Communication Skills

(e) When in distress____________________________________

____

(f) When remembering something__________________________

____

D. **Self-Help Skills**

This section covers skills involved in the activities of eating, dressing, and grooming. Check (   ) the box after each question that best describe your child.

Does ________________________:

	Always	Sometimes	Starting To	Doesn't Do
1. Drink from a cup or glass?				
2. Wipe his nose when reminded?				
3. Buckle his belt or shoes?				
4. Help set the table?				
5. Feed himself with a fork and spoon?				
6. Put on his own coat?				
7. Spread peanut butter with a knife?				
8. Tie his shoe lace?				
9. Make his own sandwich?				
10. Get a cloth and clean up his own spills?				
11. Stop at the curb and look both ways?				
12. Take off his own clothes only if they are already unfastened?				
13. Wash and dry his own face and hands?				

D. Self-Help Skills

	Always	Sometimes	Starting To	Doesn't Do
14. Know which shoe goes on which foot?				
15. Brush his teeth only if helped?				
16. Put on his own shoes?				
17. Choose his own clothing that's appropriate for the weather?				
18. Cut food with a knife?				
19. Brush or comb his own hair?				
20. Indicate if his pants are wet or soiled?				
21. Eat with only a little spilling?				
22. Brush his own teeth without help?				
23. Bathe himself				
24. Pour juice into a class without help?				
25. Dress without help except for difficult fasteners?				
26. Buckle his own seat belt?				
27. Unsnap back snaps?				

E. Social Skills

This section covers skills involved in knowing how to act with family, friends, and other people. This includes a child's feelings about herself/himself. Check ( ) the box after each question that best describes your child.

Does____________________:

	Always	Sometimes	Starting To	Doesn't Do
1. Defend his/her possessions (either verbally or physically)?				
2. Comfort playmate who is crying?				
3. Seem aware of what is "good" and what is "bad"?				
4. Finish what he/she starts?				
5. Occasionally need a security blanket or suck his/her thumb?				
6. Ask permission?				
7. Share toys?				
8. Play alone for 20 to 30 minutes?				
9. "Wait"?				
10. Ask for help when he/she needs it?				

E. Social Skills

	Always	Sometimes	Starting To	Doesn't Do
11. Play familiar family games?				
12. Take turns when playing with other children?				
13. Protect younger playmates?				
14. Obey rules for playing outside?				
15. Avoid dangerous situations?				
16. Seem to enjoy helping you?				
17. Act "acceptable" in public?				
18. Offer apologies?				
19. Insist on doing familiar activities in his/her own way?				
20. Prefer to play with other children rather than alone?				
21. Choose his/her own friends?				
22. Like to perform for others?				
23. Play with four to five children without constant supervision?				
24. Try to cooperate?				
25. Like to imitate grown-up behaviors?				

Analysis of Parent Feedback

Name ____________________ Teacher ______________________

Pre-Test Date ___________ Post-Test Date ________________

Pre-Test Levels:
Thinking Skills _________
Communication Skills ____
Self-Help Skills ________
Social Skills ___________

Post-Test Levels:
Thinking Skills _________
Communication Skills ____
Self-Help Skills ________
Social Skills ___________

This recording/analysis form is sectioned to correspond with the section (B-E) of the parent feedback form (All About ______).

Each of the sections on this form is further subdivided into levels (1 through 8/9/10). The levels represent six-month (approximate) developmental intervals.

Sampling behaviors were presented in random order on the parent feedback form. The numbers listed within each level on this form indicate the corresponding item number on the parent feedback form. (For example, #1 in B. Thinking Skills on the parent feedback form is recorded at #1, found at Level 4, on this form.)

Responses are transferred from the parent feedback form to this analysis form using this code:

A - Always
S - Sometime
St - Starting to
D - Doesn't

Spaces are provided for both pre-test (left side) and post-test (right side) scores.

Analysis of Parent Feedback

A minimum of two of the three items must be marked with "A" for a level to be considered "mastered".

The highest level marked as "mastered" for each section will be designated as the "current level of functioning". This is reported as a six-month age range (e.g. 12-18 months)

B. Thinking Skills

Level 1 __2__
(2-2½) __12__
__17__

Level 2 __7__
(2½-3) __14__
__19__

Level 3 __4__
(3-3½) __9__
__22__

Level 4 __1__
(3½-4) __10__
__18__

Level 5 __6__
(4-4½) __16__
__20__

Level 6 __8__
(4½-5) __15__
__24__

Level 7 __5__
(5-5½) __11__
__23__

Level 8 __3__
(5½-6) __13__
__21__

C. Communication Skills

Level 1 __5
(0-6) __14
__23
__cry/whine

Level 2 __1
(6-12) __17
__29
__babble

Level 3 __10
(12-18) __19
__28
__jargon

Level 4 __8
(18-24) __13
__26
__single-words
__single word sample

C. Communication Skills

Level 5 __3
(24-30) __12
__21
__combined words
__2-word sample

Level 6 __9
(30-56) __15
__24
__combined words
__3-word sample

Level 7 __4
(36-42) __6
__27
__combined words
__4-word sentence

Level 8 __7
(42-48) __16
__22
__combined words
__4/5-word sample

Level 9 __2
(48-54) __18
__25
__combined words
__5-6-word sample

Level 10 __11
(54-60) __20
__30
__combined words
__6-word sample

D. Self-Help

Level 1 __1__
(2-2½) __12__
__20__

Level 2 __6__
(2½-3) __15__
__24__

Level 3 __2__
(3-3½) __16__
__21__

Level 4 __5__
(3½-4) __13__
__27__

Level 5 __3__
(4-4½) __10__
__22__

Level 6 __7__
(4½-5) __14__
__23__

D. Self-Help

Level 7 __4__
(5-5½) __11__
__25__

Level 8 __9__
(5½-6) __17__
__26__

Level 9 __8__
(5-6½) __18__
__19__

E. Social Skills

Level 1 __5__
(2-2½) __11__
__19__

Level 2 __1__
(2½-3) __15__
__22__

Level 3 __7__
(3-3½) __9__
__24__

Level 4 __3__
__12__
__14__

Level 5 __8__
(4-4½) __10__
__20__

Level 6 __4__
(4½-5) __16__
__25__

Level 7 __6__
(5-5½) __18__
__23__

Level 8 __2__
(5½-6) __17__
__21__

Level 9 __13__
(6-6½) __
__

Detroit Public Schools
Preprimary Hearing Impaired Program

CHILD PROFILE

Dear Parent,

To ensure that your child will have a successful initial school experience, it is helpful for me to know something about your child's previous experiences. For this reason, I would like for you to take a few minutes to respond to the following questions. Thanks very much.

****

Child's Name (as on birth certificate): ____________________

Name used at home (if different) ____________________

Birthdate: ____________________

Medical History

(1) Did mother have any illnesses or problems during pregnancy or delivery? No ________ Yes ________, please explain:

____

____

____

(2) Has your child had any of the following:

	yes	no
Asthma	____	____
Hay Fever	____	____
Rheumatic Fever	____	____
Scarlet Fever	____	____
Mumps	____	____
Rubella or 3-day or German Measles	____	____
Whooping Cough	____	____
Measles-Regular	____	____

	yes	no
Chicken Pox	____	____
Polio	____	____
Appendicitis	____	____
Earaches	____	____
Diabetes	____	____
Seizures	____	____
Bone problems	____	____
Skin problems	____	____
Vision problems	____	____
Heart disease	____	____
Kidney disease	____	____
Muscle disorder	____	____
Nerve disorder	____	____
Throat infections	____	____
Tonsillectomy	____	____
Meningitis	____	____

(3) Has your child had any accidents?

No _____ Yes ______

Has your child had any serious injuries?

No _____ Yes ______

Has your child been hospitalized?

No _____ Yes ______

(4) Does your child take any medication now? No ____ Yes ____

What kind and when is it taken?______________________________

____

(5) At what age did you discover that your child had a hearing problem?______________________________

____

(6) How does your child communicate with you?

_______ screams or cries
_______ gestures/pointing
_______ sounds
_______ words
_______ sentences

(7) If your child uses verbal language (words or sentences) at home, please list a few samples:

(8) How well do you understand your child?

good____ fair____ poor____

(9) How well do others understand your child?

good____ fair_____ poor____

(10) Has your child had experiences with:	yes	no
crayons?	____	____
paint?	____	____
scissors?	____	____
clay?	____	____
(11) Does your child use: a spoon	____	____
a fork	____	____
a knife	____	____

(12) How would you describe your child's appetite?

good____ fair____ poor____

Social History

(1) How does your child get along with any brothers or sisters? good____ fair____ poor____

(2) How does your child get along with other children his/her age? good____ fair____ poor____

(6) Has anyone ever identified the cause of your child's hearing loss?________________________________

____

(7) Does anyone else in your family have a hearing loss?______

____

(8) Has your child been evaluated for anything else, besides a hearing loss?______________________________

____

____

(9) Does your child have any allergies?__________________

____

____

DEVELOPMENTAL HISTORY

(1) At what age did your child sit____crawl_____walk_____

(2) Does your child take care of toilet habits independently?
Always________ Usually ________ Seldom _______ Never _____

(3) Does your child soil his/her pants during the day?
often _______ sometimes ________ never ________

(4) Does your child get dressed independently?
Always________ Usually ________ Seldom ______ Never ______

(5) Can your child:

	No	Yes
put on shoes?	______	_______
zip?	______	_______
button?	______	_______
snap?	______	_______
put on coat?	______	_______

(3) How does your child relate to adults that are not family?

good____ fair____ poor____

(4) How does your child react to strangers?

afraid____ takes a while to warm up ____ not afraid ____

(5) How often does your child have temper tantrums?

often_____ seldom_____ rarely_____

(6) How is your child disciplined at home?____________________

____

____

(7) What does your child do when s/he is angry?______________

____

(8) What does your child do when s/he is sad?_________________

____

(9) What does your child do when s/he is afraid?______________

____

(10) Are there any things that your child is always afraid of?

____

____

(11) What makes your child happy?______________________________

____

____

---

*Is there any other information that you think would benefit your child's teacher?

*What do you think are the most important experiences that your child can have in the Preprimary Hearing Impaired Program?

X. FORMS

FORMS

Some of the forms used at the DPHISC model site are included here in the following order:

(1) Checklist for Program Implementation; used bi-monthly for teacher self-evaluation.

(2) Language Samples; posted in each center for recording language samples daily.

(3) Observation Form; posted in each center to record observations related to language, cognitive, and social behaviors.

(4) Observation Form; posted in each center to record observvstions of cognitive and social behaviors, language samples, and activity preferences for individual children.

(5) Language Samples; posted in each center for recording language samples.

(6) Activity Tally; posted in each center to record frequency per center.

(7) Small Group Report: used to record content and student performance for small activities such as auditory or language learning.

(8) Center Contract; used with "experienced" children (usually five-year-olds) to record centers played during the week.

(9) Center Contract

(10) Center Check In; posted in each center to record centers played in during the week.

(11) Cognitive Experiences Record; used to record the cognitive experiences selected every two to three weeks for the class and is maintained during the course of the school year.

(12) Representation Record; used to record the focus of representation experiences selected for individual children every two to three weeks and is maintained during the course of the school year.

(13) Problem Solving Record; used to record the focus of problem-solving experiences for individual children every two to three weeks and is maintained during the school year.

(14) Lesson Plan; used for a two to three week period. The first two pages are for listing materials available in the centers. The right-hand column is for notes and special activities. The overlay is for individualized objectives (speech targets are posted). The second two pages are used for small group activities.

CHECKLIST FOR PROGRAM IMPLEMENTATION

	Rarely	Sometimes	Usually
Physical Environment			
1. Provision of unstructured materials that can be used in a variety of ways.			
2. Provision of materials appropriate for varying levels of representation.			
3. Provision of materials that can be manipulated and actively explored.			
4. Provision of obvious and functional storage systems for materials.			
5. Provision for introduction of new materials			
6. Provision of materials that are related to current interests.			
7. Provision of materials that are "developmentally appropriate".			
8. Provision for change in the nature and/or use of materials.			
9. Provision of materials appropriate for selected cognitive objectives.			
10. Provision of materials related to the current theme or language unit.			
11. Provision of materials appropriate for individual objectives for language development, representation, problem-solving, and social development.			
12. Provision of comfortable and secure surroundings.			
13. Provision for clearly defined boundaries of centers			
Adults			
1. Apply language development techniques to what children are doing.			
2. Interact with children.			

CHECKLIST FOR PROGRAM IMPLEMENTATION

	Rarely	Sometimes	Usually
3. Model learning behaviors through interaction with the environment.			
4. Work with each child according to his needs and interests.			
5. Recognize and support children's efforts.			
6. Maximize children's participation in play and group activities.			
7. Challenge children with problems			
8. Offer choices where appropriate.			
9. Manage children and the overall classroom situation.			
10. Provide opportunities to extend learning.			
Children			
1. Are actively involved with materials they have chosen.			
2. Use adults as resources.			
3. Are aware of their actions and the effects of those actions.			
4. Encounter unresolved situations.			
5. Solve their own problems.			
6. Make choices.			
7. Initiate activities			
8. Direct their own activities.			
9. Change and add to their environment.			
10. Work for extended periods of time with a chosen activity.			
11. Use materials appropriately.			
12. Participate in routine activities.			

CHECKLIST FOR PROGRAM IMPLEMENTATION

	Rarely	Sometimes	Usually
13. Care for their own needs			
14. Communicate with adults and peers.			
15. Interact with peers.			
Paperwork			
1. Lesson plans include materials/activities related to - the theme - the cognitive objectives - individual objectives			
2. Lesson plans include small group activities.			
3. Lesson plans include large group activities.			
4. Daily schedule includes appropriate time allowances for - planning - play - recall - clean up - routines - large groups - small groups			
5. Daily schedule provides a consistent routine.			
6. Daily schedule provides a balance of child-directed activities.			
7. Daily schedule provides a balance of individual, small and large group activities.			

CHECKLIST FOR PROGRAM IMPLEMENTATION

8. Records are kept of
   - content experiences
   - problem-solving experiences
   - representation experiences
   - language development
   - speech skill acquisition
   - auditory development

1. What's new that's working? Why?

____

____

____

2. What's not working? Why?

____

____

____

3. What changes will be introduced?

____

____

____

LANGUAGE SAMPLES

Center ______________________ Objectives __________________

Week __________ ______________ __________________

Language Unit ______________ __________________

Monday

Tuesday

Wednesday

Thursday

Friday

LANGUAGE SAMPLES

Center ____________________ Objectives ____________________

Week ____________________ ____________________

Language Unit ____________________ ____________________

Jane

Sara

Michael

Alex

John

George

Debra

Objectives ____________

____

____

Child ____________

Dates ____________

Language Unit ____________

Center ____________

Activity	Frequency (tally)	Cognitive and Social Observations	Language Samples
# 1			
# 2			
# 3			
# 4			

CENTER________________________________

	ACTIVITIES									COMMENTS
	1	2	3	4	5	6	7	8	9	
Sheila										
Kathryn										
Salathiel										
Stanley										
Nathan										
Terri										
Gerald										
David										
Isiah										
Ronald										

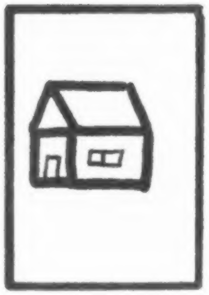
Date ____________________ Group # ______________

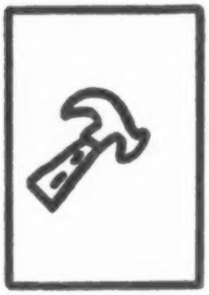
AUDITORY ACTIVITY	achieved	partially	not achieved

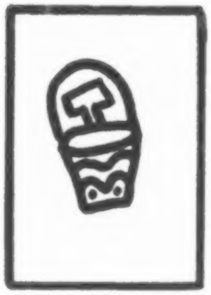
Art Center

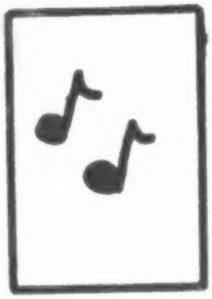
☞ ☐ check in

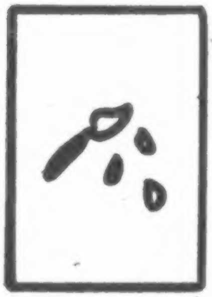
Sara	☐	☐
Mark	☐	☐
James	☐	☐
Toni	☐	☐
Marvin	☐	☐
Sheila	☐	☐

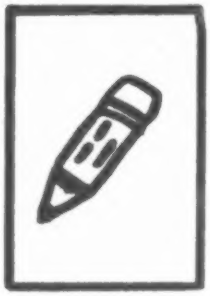


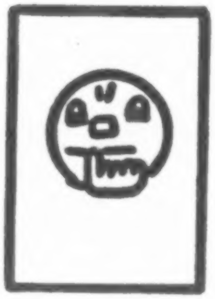


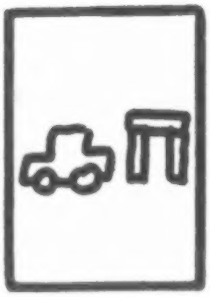


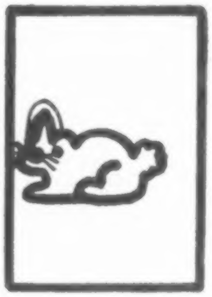


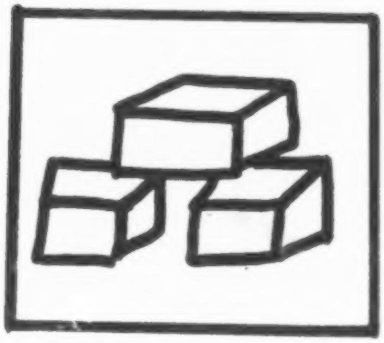


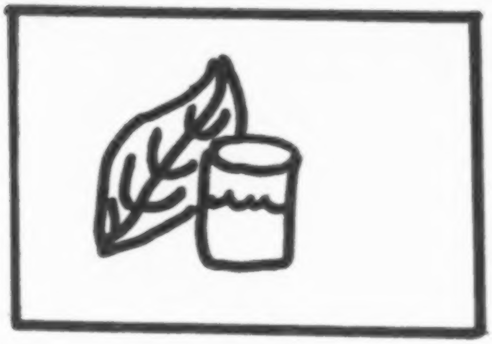


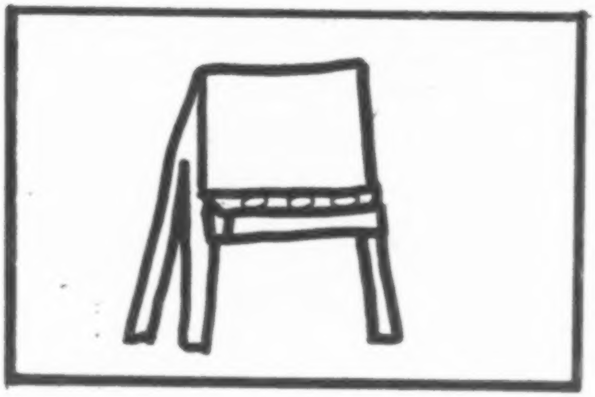


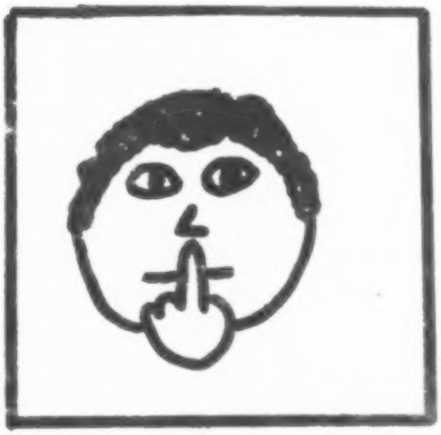


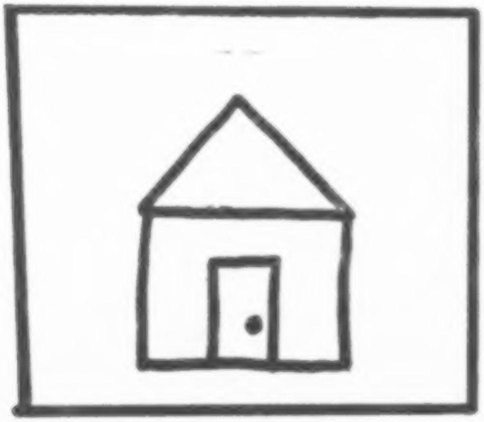












COGNITIVE EXPERIENCES RECORD

I. Logico-mathematical Knowledge

A. Classification

1. Free exploration
2. Purposeful groupings
3. Re-grouping
4. Two properties

B. Seriation

1. Relative differences
2. Fit ordered sets
3. Compare by size
4. Compare by quality
5. Compare by quantity
6. Order by size

C. Spatial Relations-Topology

1. Closed/not-closed
2. Parts and wholes
3. Linear arrangements
4. Distances
5. Alternate routes

D. Spatial Relations-Euclidean & Projective

1. Fitting together
2. Rearranging and reshaping
3. Different viewpoints
4. One's own body

5. Shapes

E. Temporal Relations

1. Different Speeds				
2. Different time intervals				
3. Coordinating past, present & future				
4. Cause-and-effect sequence				
5. Not cause-and-effect sequence				
6. Sequenced parts of an event				

F. Number

1. Compare sets				
2. Add or remove from set				
3. Reversability				
4. Equivalence				
5. Conventional number systems				
6. Parts of whole				

II. Physical Knowledge

A. Properties

1. Permanence				
2. Constancy				
3. Sensory exploration				
4. Exploring with action patterns				
5. Objects in relation to each other				
6. Use objects for other than their intended purpose				

B. Action Patterns

1. Body action patterns				
2. Use of action patterns				
3. Functional uses of objects				
4. Integrating action patterns				

REPRESENTATION

Level A. Sensori-motor/Pre-representation					
1. Participates in actual experience	1.				
2. Uses senses to explore objects	2.				
3. Uses objects/materials routinely	3.				
Level B. Index					
1. Compare models to objects	1.				
2. Uses models in play	2.				
3. Uses models with part(s) missing in play	3.				
4. Uses materials to form creations with obvious shape/for	4.				
5. Uses objects in different contexts	5.				
6. Recognizes object from sensory cue	6.				
Level C. Symbolic					
3-D					
1. Uses dissimilar model for play	1.				
2. Creates models	2.				
3. Uses created models in play	3.				
2-D					
1. Creates tracings, drawings, paintings	1.				
2. Uses tracings, drawings, paintings in play	2.				
Action					
1. Pantomimes using object	1.				

Action

2.	Directly imitates actions	2.				
3.	Pantomimes without object	3.				
4.	Imitates actions without object/ person being present	4.				
5.	Uses actions to show how something/ someone moves	5.				
6.	Uses action to show what something/ someone does	6.				
7.	Uses action to show how something/ someone looks	7.				
8.	Produces object's sound	8.				
9.	Produces sound to pretend to do something	9.				
10.	Produces sounds to pretend to be animate being	10.				
11.	Short, simple play sequence	11.				
12.	Dramatic play	12.				
13.	Uses inanimate objects as characters in play action	13.				

Level D. Sign

1.	Aware of language as representative	1.				
2.	Receptive language	2.				
3.	Expressive language	3.				
4.	Uses language appropriate to role in play theme	4.				
5.	Understands variety of representation systems	5.				

6. Uses a variety of representation systems
7. Aware of written language
8. Recognize written forms
9. Write
10. Read

6.				
7.				
8.				
9.				
10.				

PROBLEM SOLVING

A. Levels				
1. Recognize/Anticipate outcomes				
2. Perceive				
3. Confront. Try one solution				
4. Aware of different solutions				
5. Usefulness of others and objects				
6. Observe effects				
7. Evaluate				
8. Transfer learning				
B. Types 1. Teacher-constructed				
Child-constructed				
2. Routine				
Novel				
3. Visible				
Not visible				
4. Reversible				
Not reversible				

Language Unit ____________________

Cognitive ____________________		Cognitive ____________________	
Center ____		Center ____	
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
Center ____		Center ____	
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
	*	*	*
Center ____		Center ____	
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
Center ____		Center ____	
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
Center ____		Center ____	
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
Other ____		Other ____	
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*

Mon.	Tues.	Wed.	Thurs.	Fri.	Auditory Groups
					Obj.
					Obj.
					Obj.
					Obj.
					Obj.
					Obj.
					Obj.
					Obj.
					Obj.

Language Groups	Mon.	Tues.	Wed.	Thurs.	Fri.
Obj.					
Obj.					
Obj.					
Obj.					
Obj.					
Obj.					
Obj.					
Obj.					
Obj.					

Individualized Objectives

Representation

Language

Social

Problem Solving

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